



101 8th St., Oakland, CA 94607 TEL 510.817.5700 EMAIL info@mtc.ca.gov WEB www.mtc.ca.gov

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JAKE MACKENZIE, VICE CHAIR Vice Chair of MTC and BATA

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MTC Commissioner, State Business, Transportation and Housing Agency

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STEVE HEMINGER
Executive Director

ALIX BOCKELMAN
Deputy Executive Director, Policy

ANDREW B. FREMIER
Deputy Executive Director, Operations

May 19, 2015

Addendum No. 1

Invitation For Bid (IFB)
I-680 Express Lanes Project
In Alameda and Contra Costa Counties on Route 680 PM
R20.1/21.9, R0.0/14.0
Dated April 28, 2015

Dear Consultant:

This letter is Addendum No. 1 to the Invitation for Bid I-680 Express Lanes Project, dated April 28, 2015 ("IFB"). Where text is revised, deleted text is shown in strike-through format; added text is *italicized*. The RFP is revised as follows:

Addendum	<u>Reference</u>	Change
<u>Item</u>		
1.	IFB, Part 1,	Bid Submission & Bid Opening
	Notice to	
	Bidders, Bid	Interested bidders must submit their bids in sealed
	Submission, Page	envelopes no later than 4:00 P.M. PST on June 5, 2015.
	9	Bids received after that date and time will not be
		considered. All bids must be completed and submitted
		on the enclosed Bid Forms, in Part 5 of this IFB, in
		order to be considered. Bid Opening is open to the public
		and will be held at the due date and time listed above at
		BAIFA offices located at Joseph P. Bort Metro Center, 101
		Eighth St, Oakland CA, 94607, in the Fishbowl Conference
		Room
2. IFB, Part 1,		BAIFA Point of Contact:
	Notice to	A submitted bid is considered a firm offer to
	Bidders, BAIFA	provide the services described for a period of one hundred
	Point of Contact,	twenty (120) days from the date of bid opening.
	Page 9	
		Bids and all inquiries relating to this IFB must be
		submitted to the Contracts Specialist at the address shown
		below. E-mail inquiries may be directed to
		< <u>MBrinton@mtc.ca.gov</u> >.
		Michael Brinton, BAIFA Contracts Specialist
		Bay Area Infrastructure Financing Authority
		Joseph P. Bort Metro Center
		101 Eighth Street, 3 rd Floor Reception Desk
		Oakland, CA 94607-4700
		510-817-5727

Addendum	Reference	Change			
Item 3.	IFB, Part 1,	Bidder Selection Timetable			
	Notice to Bidders, BAIFA Bidder Selection Time Table,	10:00 a.m. PST, Wednesday, May 20, 2015	Mandatory Pre-Bid Conference		
	Page 11	8:00 a.m. PST, Wednesday, May 27, 2015	Deadline for requests for clarification or exception		
		4:00 p.m. PST, Friday, June 5, 2015 Closing date & time for receipt of bids & bid opening Wednesday, June 17 BAJEA Committee			
		Wednesday, June 17, 2015 BAIFA Committee consideration of recommendation for award			
		Wednesday, June 24, Issuance of Notice of Award			
		* Award and approval dates are approximates and are subject to change before or after the closing date of the IFB.			
4.	IFB, Part 2, Special Provisions - Forward, Notice of Award, 1st Paragraph, Page 14,	After Bids are opened at the time and place stipulated, Bids will be reviewed by BAIFA. The contract will be awarded to the lowest responsive and responsible Bidder subject to the approval of BAIFA Committee. BAIFA reserves the right to award a contract or to reject any or all bids. No Bidder may withdraw its bid for the period of days stipulated on the Bid Form after the date set for the Bid Opening. The Bid is			
5.	IFB, Part 5, <u>Bid</u> Forms, Bid Form #1, Page 43	IFB Part 5, <u>Bid Forms</u> , Bid Form with the attached Bid Form #1.	#1 is deleted in its entirety and replaced		
6.	IFB, Part 10,	10	GENERAL		
	Construction Details, Division		section 10-1.02:		
	II, General Construction, Page 139	The first order of work must be to backhaul communications work a	o install the conduit and pull boxes for the as shown.		
		Do not place the uppermost layer of new pavement until all underlying conduits and loop detectors are installed.			
		between the elevation of the exist	a difference in excess of 0.15 feet exists ing pavement and the elevation of an eveled way, place and compact material		

		operation, you placing of the Place the mate 4:1 (horizontal	against the vertical cut adjacent to the traveled way. During the excavation operation, you may use native material for this purpose except once the blacing of the structural section starts, structural material must be used. Place the material to the top of the existing pavement and taper at a slope of 4:1 (horizontal:vertical) or flatter to the bottom of the excavation. Do not use treated base for the taper.				
7	IFB, Part 10,	To be added a	To be added after line T3B Temporary Railing (Type K):				
	Construction Details,	RSP T9	RSP T9 Traffic Control System Tables for Lane and Ramp Closures				
	Standard Plans	RSP T10 Traffic Control System for Lane Closure on Freeways and					
	List, Page 206	Expressways					
		RSP T10A Traffic Control System for Lane Closures on Freeways and Expressways					
		RSP T14	Traffic Control System for Ramp Closure				
8.	IFB, Appendix	Appendix A	Contract Drawings and Plans, Project Plan Sheets: 1, 116 –				
0.		1 1 1	-				
0.	A, Contract	118, 120, 124	, 126, 128, 131, 134 – 139, 142, 146, 150, 151, 153, 154, 158,				
0.	A, Contract Drawings and	118, 120, 124 161 – 163, 16	, 126, 128, 131, 134 – 139, 142, 146, 150, 151, 153, 154, 158, 5 – 167, 169, 170, 275, 463, 495 - 498, 500, 504, 506, 508,				
0.	A, Contract Drawings and Plans, (see	118, 120, 124 161 – 163, 16 511, 514 – 51	, 126, 128, 131, 134 – 139, 142, 146, 150, 151, 153, 154, 158, 5 – 167, 169, 170, 275, 463, 495 - 498, 500, 504, 506, 508, 9, 522, 526, 530, 531, 533, 534, 538, 541 – 543, 545 – 547,				
0.	A, Contract Drawings and Plans, (see Supplemental	118, 120, 124 161 – 163, 16 511, 514 – 51 549, 550, 565	, 126, 128, 131, 134 – 139, 142, 146, 150, 151, 153, 154, 158, 5 – 167, 169, 170, 275, 463, 495 - 498, 500, 504, 506, 508, 9, 522, 526, 530, 531, 533, 534, 538, 541 – 543, 545 – 547, , 566 are deleted in their entirety and replaced with the				
	A, Contract Drawings and Plans, (see Supplemental Documents)	118, 120, 124 161 – 163, 16 511, 514 – 51 549, 550, 565 attached <i>Appe</i>	, 126, 128, 131, 134 – 139, 142, 146, 150, 151, 153, 154, 158, 5 – 167, 169, 170, 275, 463, 495 - 498, 500, 504, 506, 508, 9, 522, 526, 530, 531, 533, 534, 538, 541 – 543, 545 – 547, , 566 are deleted in their entirety and replaced with the <i>endix A</i> , Contract Drawings / Plans.				
9.	A, Contract Drawings and Plans, (see Supplemental Documents) IFB, Appendix	118, 120, 124 161 – 163, 16 511, 514 – 51 549, 550, 565 attached <i>Appe</i> Appendix A,	, 126, 128, 131, 134 – 139, 142, 146, 150, 151, 153, 154, 158, 5 – 167, 169, 170, 275, 463, 495 - 498, 500, 504, 506, 508, 9, 522, 526, 530, 531, 533, 534, 538, 541 – 543, 545 – 547, , 566 are deleted in their entirety and replaced with the endix A, Contract Drawings / Plans. Contract Drawings and Plans, Project Plan Sheets: 566A,				
	A, Contract Drawings and Plans, (see Supplemental Documents)	118, 120, 124 161 – 163, 16 511, 514 – 51 549, 550, 565 attached <i>Appe</i> Appendix A,	, 126, 128, 131, 134 – 139, 142, 146, 150, 151, 153, 154, 158, 5 – 167, 169, 170, 275, 463, 495 - 498, 500, 504, 506, 508, 9, 522, 526, 530, 531, 533, 534, 538, 541 – 543, 545 – 547, , 566 are deleted in their entirety and replaced with the <i>endix A</i> , Contract Drawings / Plans.				
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	A, Contract Drawings and Plans, (see Supplemental Documents) IFB, Appendix A, Contract	118, 120, 124 161 – 163, 16 511, 514 – 51 549, 550, 565 attached <i>Appe</i> Appendix A, 9 566B, 566C, 5 566M, 566N,	1, 126, 128, 131, 134 – 139, 142, 146, 150, 151, 153, 154, 158, 5 – 167, 169, 170, 275, 463, 495 - 498, 500, 504, 506, 508, 9, 522, 526, 530, 531, 533, 534, 538, 541 – 543, 545 – 547, 566 are deleted in their entirety and replaced with the endix A, Contract Drawings / Plans. Contract Drawings and Plans, Project Plan Sheets: 566A, 566D, 566E, 566F, 566G, 566H, 566I, 566I, 566K, 566L,				
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The remaining provisions of the IFB remain unchanged. In the event of a conflict between this Addendum and the previous version(s), this Addendum takes precedence.

Any questions concerning this addendum to the IFB should be directed to Michael Brinton, Contracts Specialist, at (510) 817-5727 or mbrinton@mtc.ca.gov.

Sincerely,

DocuSigned by:

Andrew B. Fremier

Deputy Executive Director, Operations

BID FORM #1

BID FORM

CONTRACT NO. BAIFA-100

I-680 Express Lanes Project

FROM: BI	DDER'S NAME	
TO: TH	E BAY AREA INFRA	ASTRUCTURE FINANCING AUTHORITY,
terms and conditio	ns of the Contract Doc	for this project, the undersigned Bidder, being thoroughly familiar with the uments, hereby proposes and agrees fully to perform the work within the the Contract Documents.
The Bidder hereby	acknowledges receipt	of the following Addenda to the Contract Documents:
Addendum No	Dated	

Bidder hereby incorporates by reference all provisions of the Contract Documents that follow this Bid Form.

Page 5

SCHEDULE OF QUANTITIES AND PRICES CONTRACT NO. BAIFA-100 EA No. 04-3G9504 I-680 Express Lanes Project

The prices quoted below include all applicable taxes, fees, permits, delivery, the cost of Bonds, insurance, and other charges and expenses, direct or indirect, as required.

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
1	070030	Lead Compliance Plan	LS	1		
2	080050	Progress Schedule (Critical Path Method)	LS	1		
3	090100	Time-Related Overhead (WDAY)	WDAY	300		
4	120090	Construction Area Signs	LS	1		
5				1		
6	120120	Type III Barricade	EA	98		
7	120165	Channelizer (Surface Mounted)	EA	1,450		
8	120300	Temporary Pavement Marker	EA	520		
9	121161	Temporary Terminal Section (Type K)	EA	64		
10	128652	Portable Changeable Message Sign (LS)	LS	1		
11	129000	Temporary Railing (Type K)	LF	31,800		
12	129100	Temporary Crash Cushion Module	EA	182		
13	129102A	Temporary Alternative Crash Cushion	EA	1		
14	130100	Job Site Management	LS	1		
15	130200	Prepare Water Pollution Control Program	LS	1		
16	130620	Temporary Drainage Inlet Protection	EA	62		
17	130640	Temporary Fiber Roll	LA	810		
18	130730	Street Sweeping	LS	1		
19	130800	Temporary Active Treatment System	LS	1		
20	130900	Temporary Concrete Washout	LS	1		
21	141000	Temporary Fence (Type ESA)	LF	74,600		
22	141010A	Temporary Fence (Wildlife Exclusion Type E)	LF	11,500		
23	141103	Remove Yellow Thermoplastic Traffic Stripe (Hazardous Waste)	LF	1,220		
24	141120	Treated Wood Waste	LB	4,350		
25	148005	Noise Monitoring	LS	1		
26	150661	Remove Guardrailing	LF	310		
27	150714	Remove Thermoplastic Traffic Stripe	LF	6,090		
28	150715	Remove Thermoplastic Pavement Marking	SQFT	2,810		
29	150722	Remove Pavement Marker	EA	3,500		
30	150742	Remove Roadside Sign	EA	25		
31	150748	Remove Roadside Sign Panel	EA	81		
32	150771	Remove Asphalt Concrete Dike	LF	960		
33	150812	Remove Pipe (LF)	LF	1,090		
34	150820	Remove Inlet	EA	2		

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
35	150830A	Remove Edge Drain	LF	1,160		
36	150840A	Remove Underdrain	LF	780		
37	153103	Cold Plane Asphalt Concrete Pavement	SQYD	7,340		
38	153210	Remove Concrete	CY	5		
39	153221	Remove Concrete Barrier	LF	5,840		
40	155231	Culvert Slurry-Cement Backfill	CY	1,410		
41	190101	Roadway Excavation	CY	380		
42	190105	Roadway Excavation (Type Z-2) (Aerially Deposited Lead)	CY	120		
43	193001	Structure Backfill	CY	1,740		
44	210350	Fiber Rolls	LF	810		
45	210600	Compost	SQFT	87,200		
46	390132	Hot Mix Asphalt (Type A)	TON	1,860		
47	394074	Place Hot Mix Asphalt Dike (Type C)	LF	350		
48	394076	Place Hot Mix Asphalt Dike (Type E)	LF	280		
49	394077	Place Hot Mix Asphalt Dike (Type F)	LF	360		
50	510502 (F)	Minor Concrete (Minor Structure)	CY	19		
51	510526	Minor Concrete (backfill)	CY	720		
52	560208 (F)	Furnish Sign Structure (Tubular)	LB	26,300		
53	560209 (F)	Install Sign Structure (Tubular)	LB	26,300		
54	560218 (F)	Furnish Sign Structure (Truss)	LB	476,900		
55	560219 (F)	Install Sign Structure (Truss) Furnish Laminated Panel Sign (1"- Type	LB	476,900		
56	560244	A)	SQFT	9,820		
57	560248	Furnish Single Sheet Aluminum Sign (0.063"-Unframed) 54" Cast-in-Drilled-Hole Concrete Pile	SQFT	1,630		
58	561014	(Sign Foundation)	LF	50		
59	561016	60" Cast-in-Drilled-Hole Concrete Pile (Sign Foundation)	LF	940		
60	562002	Metal (Barrier Mounted Sign)	LB	450		
61	568001	Install Sign (Strap and Saddle Bracket Method)	EA	44		
62	568017	Install Roadside Sign Panel on Existing Post	EA	78		
63	597600	Prepare and Paint Concrete	SQFT	10		
64	620100	18" Alternative Pipe Culvert	LF	730		
65	620180	30" Alternative Pipe Culvert	LF	180		
66	620260	42" Alternative Pipe Culvert	LF	370		
67	665718	18" Slotted Corrugated Steel Pipe (.168" Thick)	LF	220		
68	681103	3" Plastic Pipe (Edge Drain)	LF	1,090		
69	682045	Class 3 Permeable Material	CY	190		
70	685020	8" Alternative Pipe Underdrain	LF	560		
71	731502	Minor Concrete (Miscellaneous Construction)	CY	9		

Item	Item	Item Description	Unit of	Estimated	Unit Price	Item Total
No.	Code		Measure	Quantity		
72	750001 (F)	Miscellaneous Iron And Steel	LB	4,460		
73	820130	Object Marker	EA	470		
74	832007	Midwest Guardrail System (Wood Post)	LF	650		
75	832070	Vegetation Control (Minor Concrete)	SQYD	580		
76	839221	Double Midwest Guardrail System (Wood Post)	LF	25		
77	839543	Transition Railing (Type WB-31)	EA	1		
78	839576	End Cap (Type A)	EA	1		
79	839581	End Anchor Assembly (Type SFT)	EA	3		
80	839582	End Anchor Assembly (Type CA)	EA	1		
81	839584	Alternative In-Line Terminal System	EA	4		
82	839591	Crash Cushion, Sand Filled	EA	1		
83	839699	Concrete Barrier (Type 60P)	LF	160		
84	839701	Concrete Barrier (Type 60)	LF	340		
85	2000		LF	800		
86			LF	4,230		
87	839713	Concrete Barrier (Type 60R)	LF	570		
88	840516	Thermoplastic Pavement Marking (Enhanced Wet Night Visibility)	SQFT	13,900		
89	846001	4" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	180,500		
90	846004	4" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility) (Broken 17-7)	LF	680		
91	846005 4" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility) (Broken 34-14) LF 28,300		28,300			
92	846009	8" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	3,520		
93	846011	8" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility) (Broken 34-14)	LF	128,400		
94	846012	8" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility) (Broken 12-3)	LF	440		
95	846012A	Contrast Pavement Stripe Black Paint (Broken)	LF	97,300		
96	846012B	3" Contrast Pavement Stripe Black Paint (Solid)	LF	12,400		
97	846020A	12" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	400		
98	850101	Pavement Marker (Non-Reflective)	EA	3,120		
99	850111	Pavement Marker (Retroreflective)	EA	9,870		
100	860090	Maintaining Existing Traffic Management System Elements During Construction	LS	1		
101	860202A	Electronic Toll Systems	LS	1		
102	860401A	Lighting (BAIFA)	LS	1		
103	860202B	Backhaul Communications	LS	1		
104	999990	Mobilization	LS	1		

Page 8

The Total Contract Price shall be the sum of of the Bid Items above.

	In Words:	Numbers (\$):
TOTAL CONTRACT PRICE:		

SUBMITTED BY:	CONTRACTOR INFORMATION
Full and Correct Name of Bidder:	The names of all persons as principals interested in the foregoing bid are as follows:
Business Address:	(IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give legal name of corporation, and names of the President and Secretary thereof; if a
	names of all individual northers composing
Phone:	firm; if Bidder or other interested person is
Fax:	an individual, give first and last names in
California Contractor's License:	full. If a Bidder is a joint venture, supply the above information for each joint venture
Number:	<u> </u>
Class:	<u> </u>
Expires:	

The person signing this Bid Form for the Bidder certifies that he or she is authorized by the Bidder to do so and that the Bidder is bound contractually by that signature.

Signature		
Name		
·	(Print)	
Title		
Data		

APPENDIX A

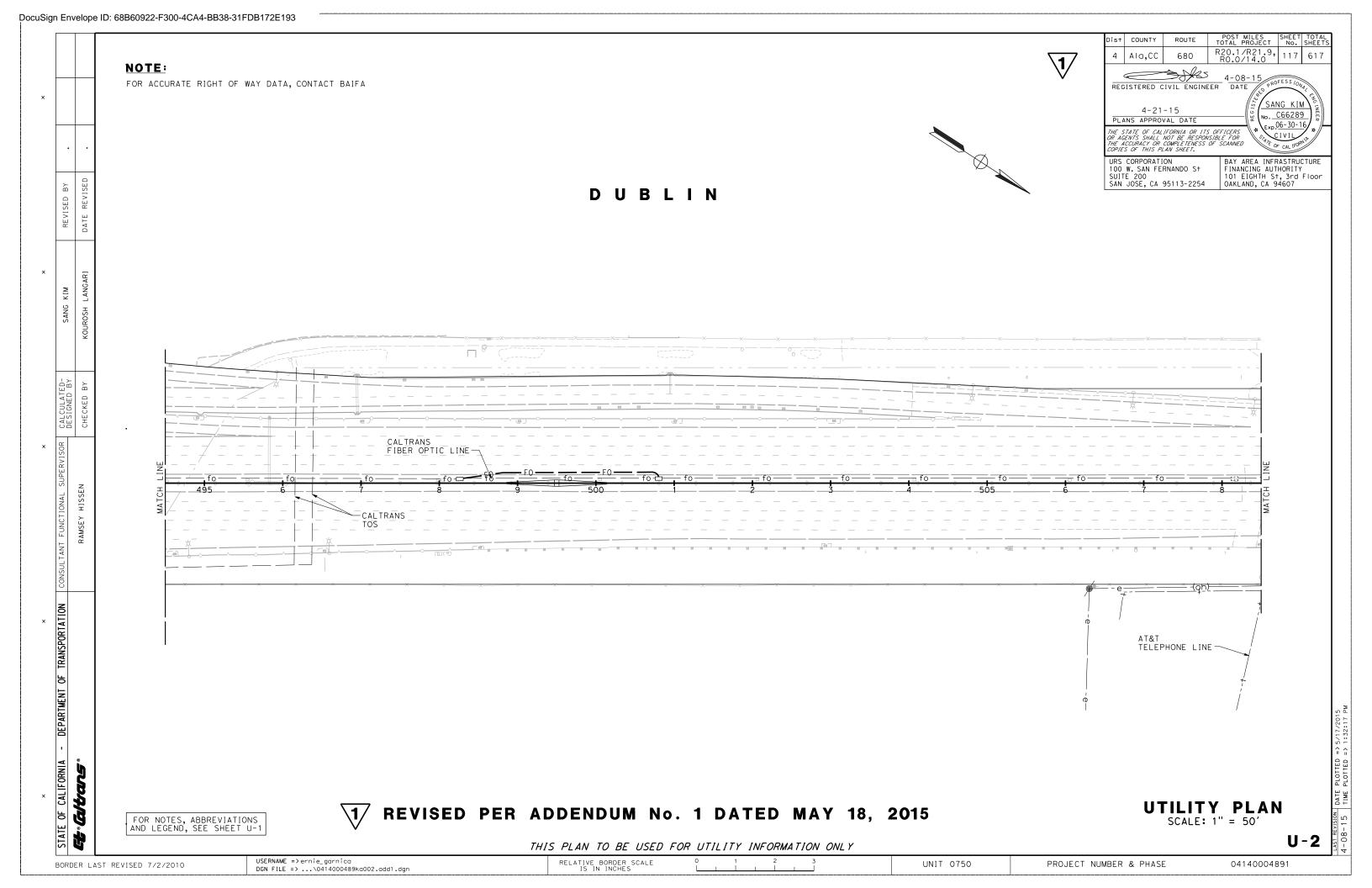
Contract Drawings / Plans

Replacement Sheets:

Project Plan Sheets 1, 116 – 118, 120, 124, 126, 128, 131, 134 – 139, 142, 146, 150, 151, 153, 154, 158, 161 – 163, 165 – 167, 169, 170, 275, 463, 495 - 498, 500, 504, 506, 508, 511, 514 – 519, 522, 526, 530, 531, 533, 534, 538, 541 – 543, 545 – 547, 549, 550, 565, 566.

Added Sheets:

Project Plan Sheets 566A, 566B, 566C, 566D, 566E, 566F, 566G, 566H, 566I, 566J, 566K, 566L, 566M, 566N, 566O, 566P, 566Q, 566R, 566S, 566T, 566U, 566V, 617A, 617B, 617D



BORDER LAST REVISED 7/2/2010

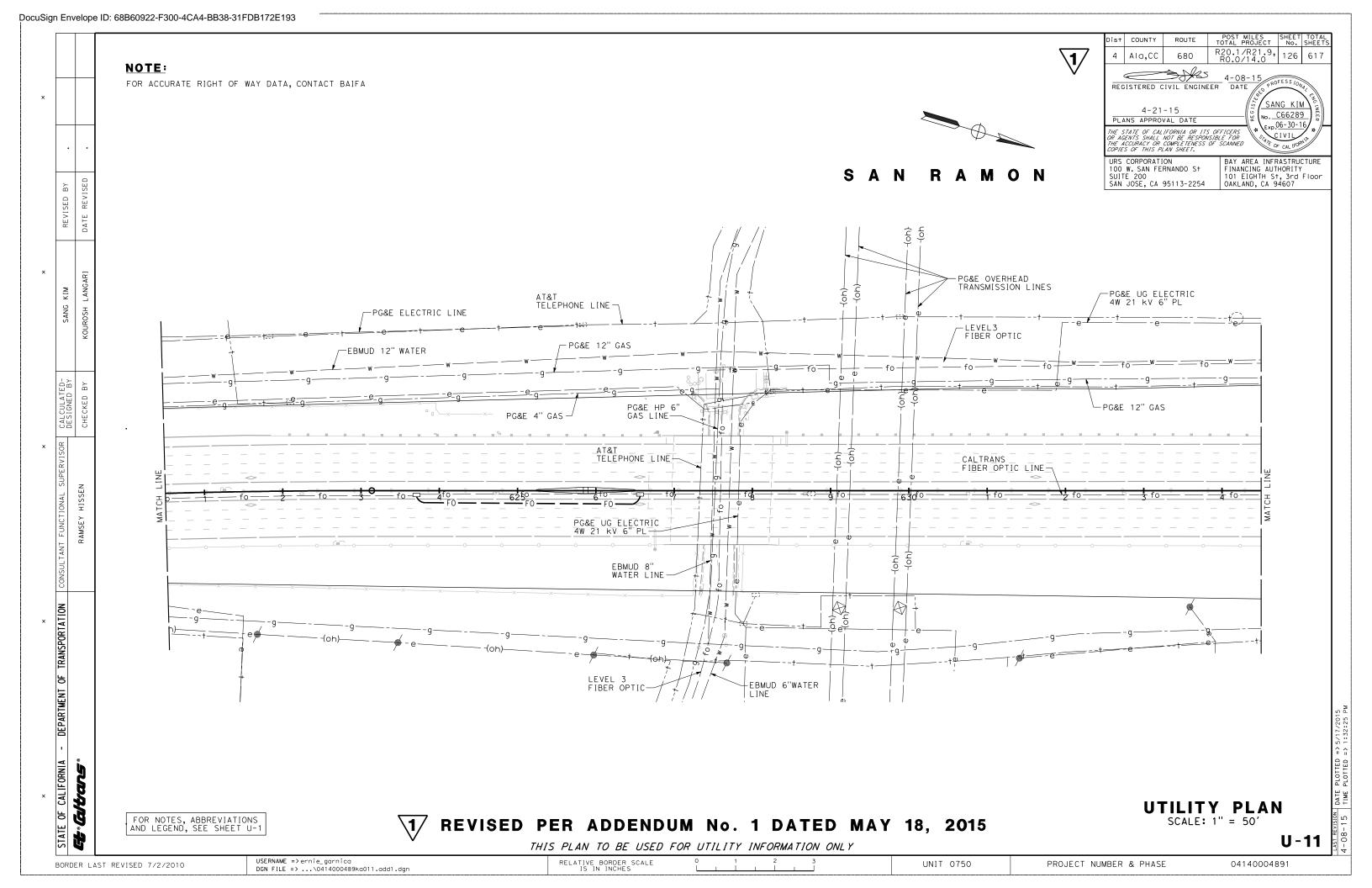
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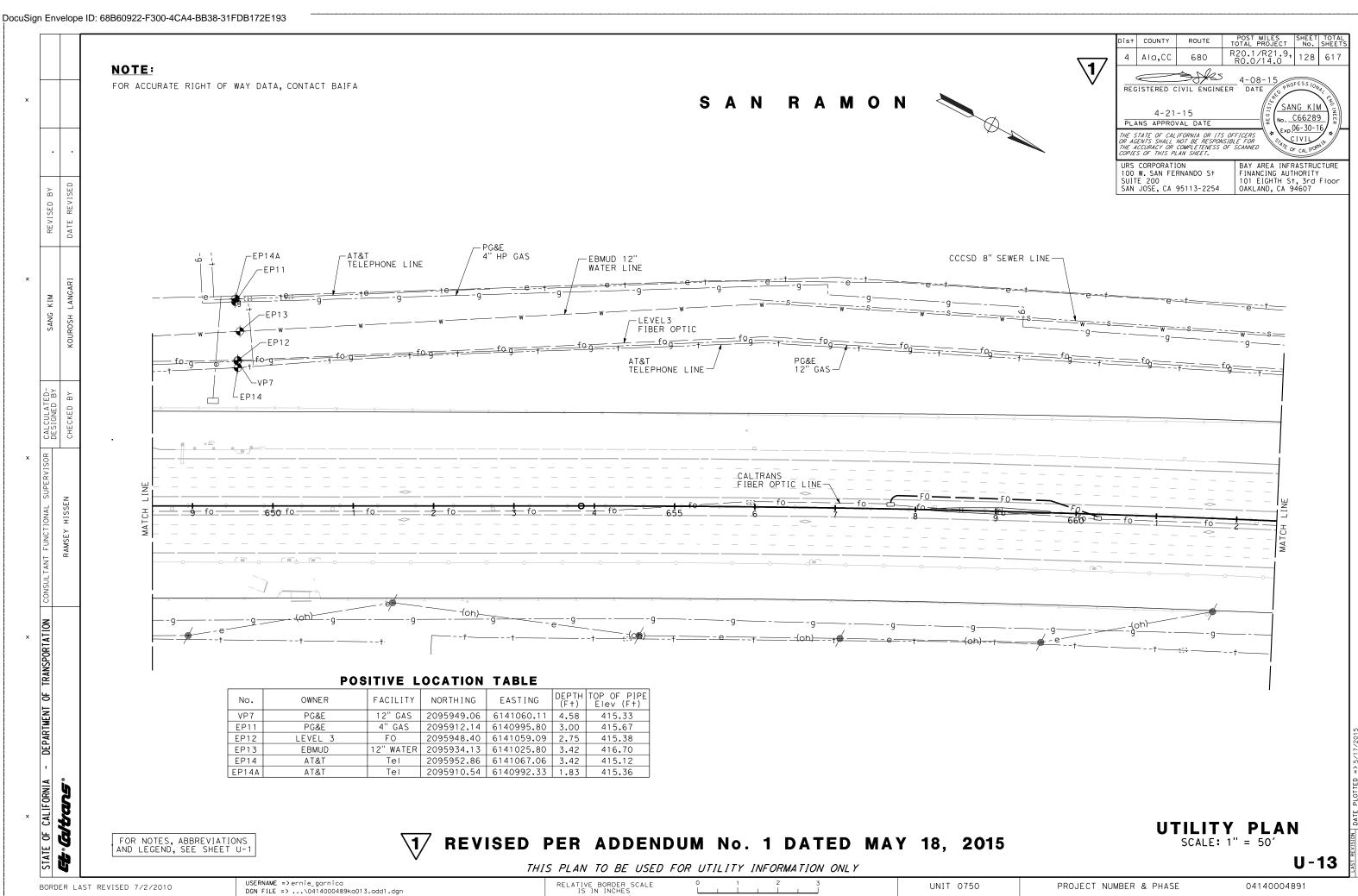
RELATIVE BORDER SCALE
IS IN INCHES

UNIT 0750

PROJECT NUMBER & PHASE

04140004891





NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT BAIFA



S	Α	N	R	Α	М	0	N
_	, ,			_		•	

POST MILES SHEET TOTAL TOTAL PROJECT No. SHEETS COUNTY R20.1/R21.9, 131 617 4 Ala,CC 680

REGISTERED CIVIL ENGINEER 4-08-15

4-21-15 PLANS APPROVAL DATE

1/

THE STATE OF CALIFORNIA OR ITS OFFICERS
OR AGENTS SHALL NOT BE RESPONSIBLE FOR
THE ACCURACY OR COMPLETENESS OF SCANNED
TOPIES OF THIS PLAN SHEET.

URS CORPORATION 100 W. SAN FERNANDO S+ SUITE 200 SAN JOSE, CA 95113-2254 BAY AREA INFRASTRUCTURE FINANCING AUTHORITY 101 EIGHTH St, 3rd Floor OAKLAND, CA 94607

SANG KIM

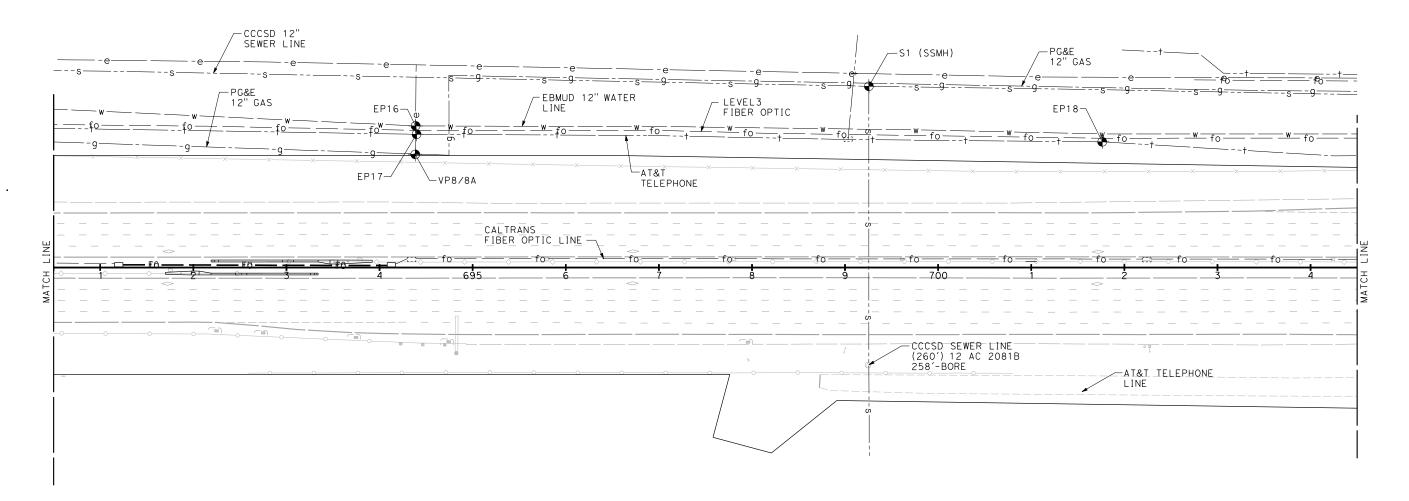
No. <u>C66289</u>

Exp.06-30-16

POSITIVE LOCATION TABLE

No.	OWNER	FACILITY	NORTHING	EASTING	DEPTH (F+)	TOP OF PIPE Elev (F+)
VP8	PG&E	12" GAS	2100020.04	6139176.10	3.92	444.05
VP8A	PG&E	UG Elec	2100020.04	6139176.10	2.17	445.80?
EP16	EBMUD	12" WATER	2100006.75	6139148.55	4.83	444.94
EP17	AT&T	Tel	2100011.67	6139156.15	4.17	444.92
EP18	AT&T	Tel	2100674.42	6138834.95	8.50	444.81
S1	CCCSD	SSMH	2100423.55	6138893.32	7.58	442.20

* REFER TO TOP OF LID GRADE ELEVATIONS.



FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET U-1

REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN SCALE: 1" = 50'

U-16

BORDER LAST REVISED 7/2/2010

DEPARTMENT OF TRANSPORTATION

CALIFORNIA

USERNAME =>ernie_garnica
DGN FILE =>...\0414000489ka016.add1.dgn

UNIT 0750

PROJECT NUMBER & PHASE

04140004891

RELATIVE BORDER SCALE
IS IN INCHES

NOTE: FOR ACCURATE RIGHT OF WAY DATA, CONTACT BAIFA S A N R A M O N **POSITIVE LOCATION TABLE** DEPTH TOP OF PIPE (F+) Elev (F+) EASTING OWNER NORTHING S2 CCCSD SSMH 2103645.53 6137276.39 5.33 473.56 * * REFER TO TOP OF LID GRADE ELEVATIONS. -S2 (SSMH) -PG&E UG ELECT -LEVEL 3 FIBER OPTIC LINE EBMUD 36" WATER LINE-AT&T TELEPHONE PG&E 3W 21 kV OH ELECTRIC-CALTRANS_ _ = -FIBER_OPTIC LINE: CCCSD 12" SEWER LINE -DEPARTMENT OF TRANSPORTATION CCCSD SEWER LINE 421'-12AC-2081B CALIFORNIA **Gltans**

UTILITY PLAN SCALE: 1" = 50'

THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

U-19

RELATIVE BORDER SCALE
IS IN INCHES

Dist COUNTY

4 Ala,CC

680

REGISTERED CIVIL ENGINEER 4-08-15

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

4-21-15

PLANS APPROVAL DATE

URS CORPORATION 100 W. SAN FERNANDO S+ SUITE 200 SAN JOSE, CA 95113-2254

-PG&E 8" HP GAS

R20.1/R21.9, 134 617

SANG KIM

No. <u>C66289</u>

Exp. 06-30-16

BAY AREA INFRASTRUCTURE FINANCING AUTHORITY 101 EIGHTH St, 3rd Floor OAKLAND, CA 94607

BORDER LAST REVISED 7/2/2010

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET U-1

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USERNAME =>ernie_garnica
DGN FILE =>...\0414000489ka019.add1.dgn

UNIT 0750

PROJECT NUMBER & PHASE

04140004891

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT BAIFA

R20.1/R21.9, 135 617 Ala,CC 680

REGISTERED CIVIL ENGINEER 4-08-15

4-21-15 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

URS CORPORATION 100 W. SAN FERNANDO S+ SUITE 200 SAN JOSE, CA 95113-2254 BAY AREA INFRASTRUCTURE FINANCING AUTHORITY 101 EIGHTH St, 3rd Floor OAKLAND, CA 94607

SANG KIM

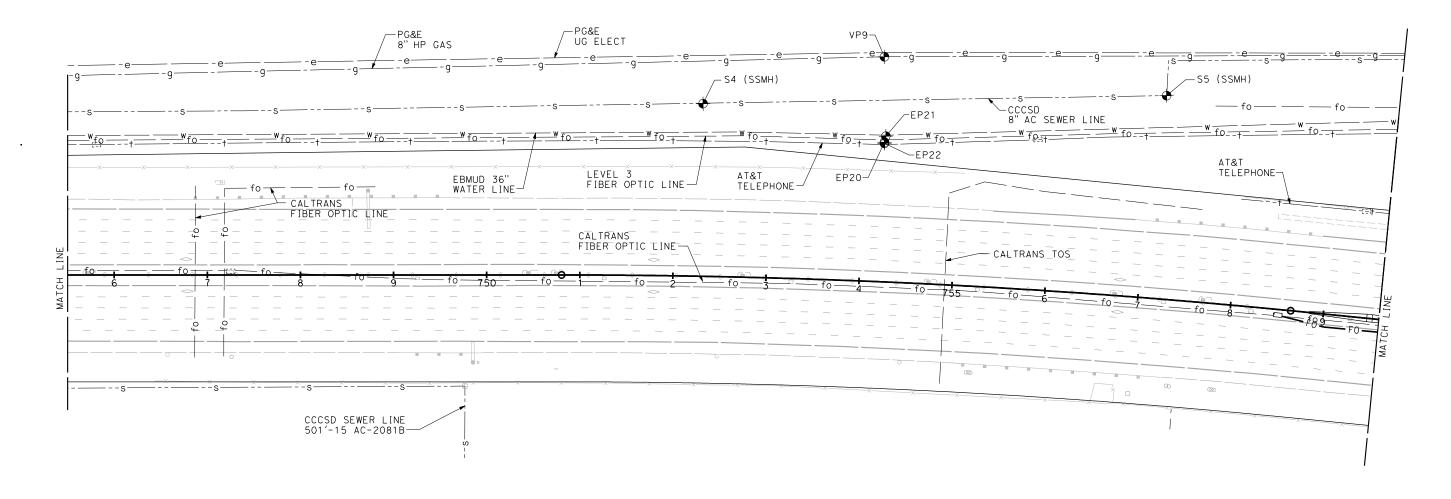
No. <u>C66289</u>

Exp. 06-30-10

POSITIVE LOCATION TABLE

No.	OWNER	FACILITY	NORTHING	EASTING	DEPTH (F+)	TOP OF PIPE Elev (Ft)
S4	CCCSD	SSMH	2105178.11	6136536.10	11.92	491.26
S5	CCCSD	SSMH	2105619.89	6136306.31	8.58	491.56
VP9	PG&E	GAS	2105330.05	6136404.16	4.83	493.49
EP20	Level 3	FO	2105370.96	6136486.20	7.00	492.73
EP21	EBMUD	36" WATER	2105369.41	6136479.79	7.00	493.13
EP22	AT&T	Tel	2105371.56	6136487.30	7.00	492.59

^{*} REFER TO TOP OF LID GRADE ELEVATIONS.



FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET U-1

REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

UTILITY PLAN SCALE: 1" = 50'

U-20

THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

BORDER LAST REVISED 7/2/2010

DEPARTMENT OF TRANSPORTATION

CALIFORNIA

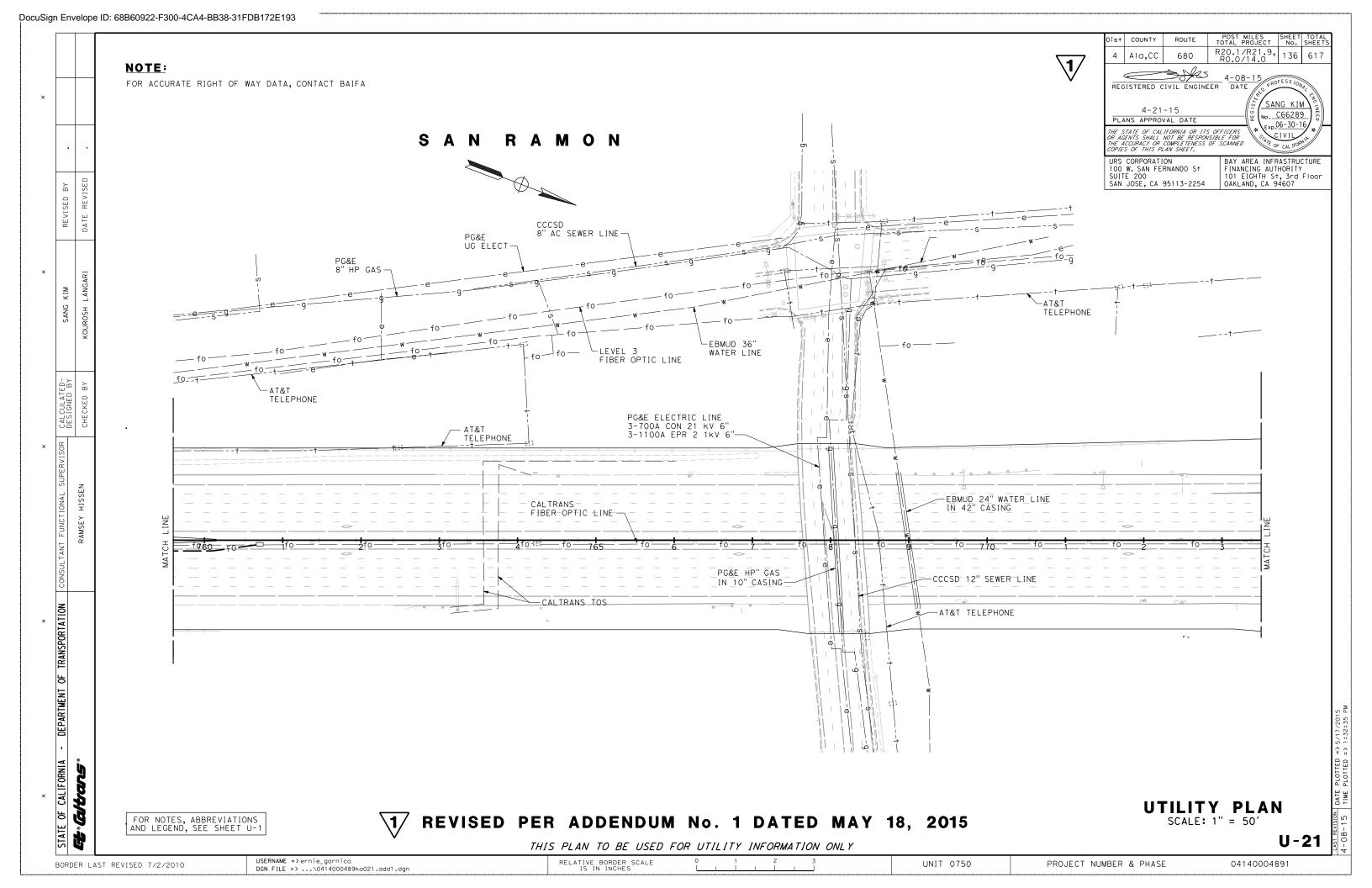
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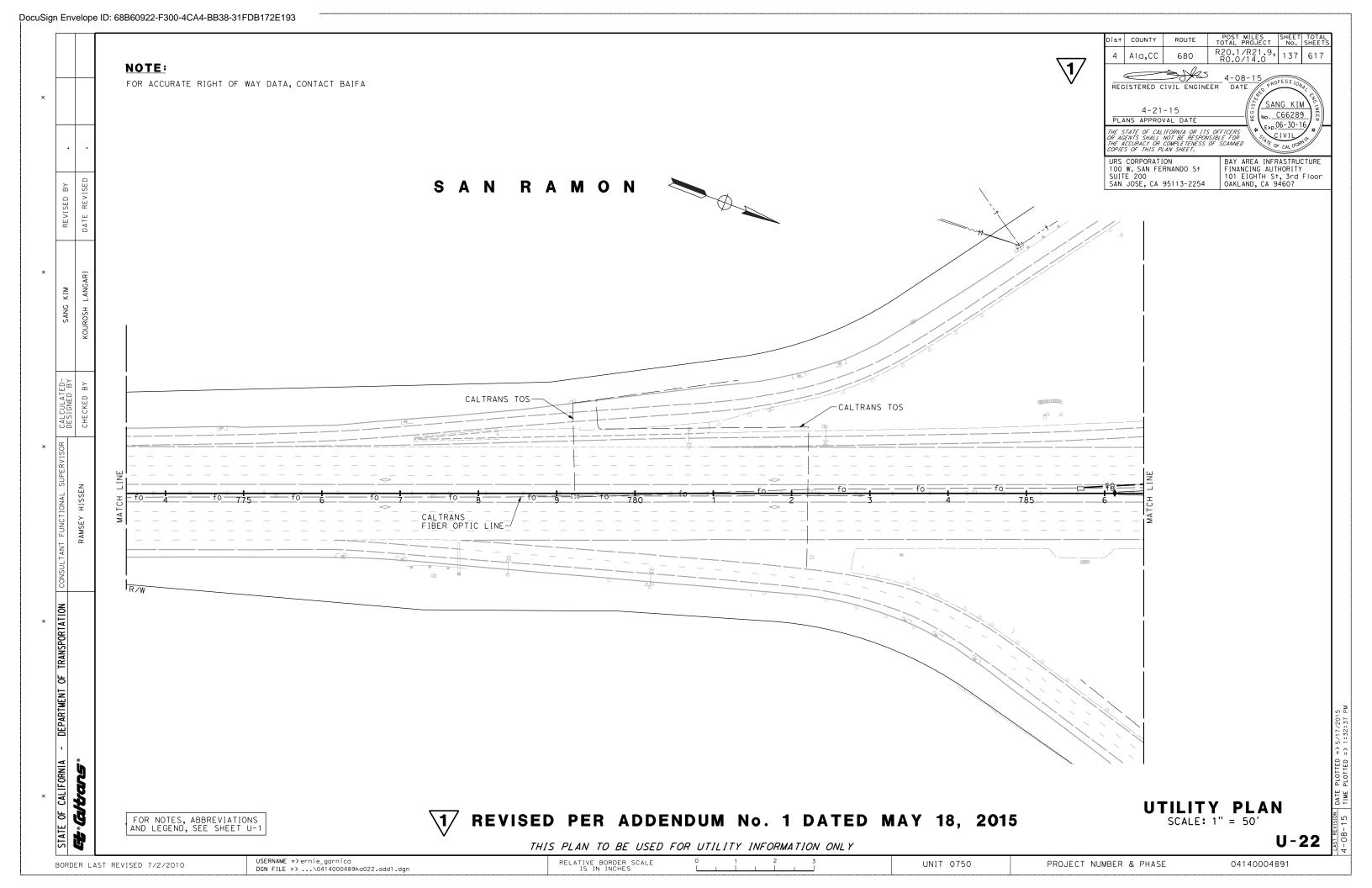
UNIT 0750

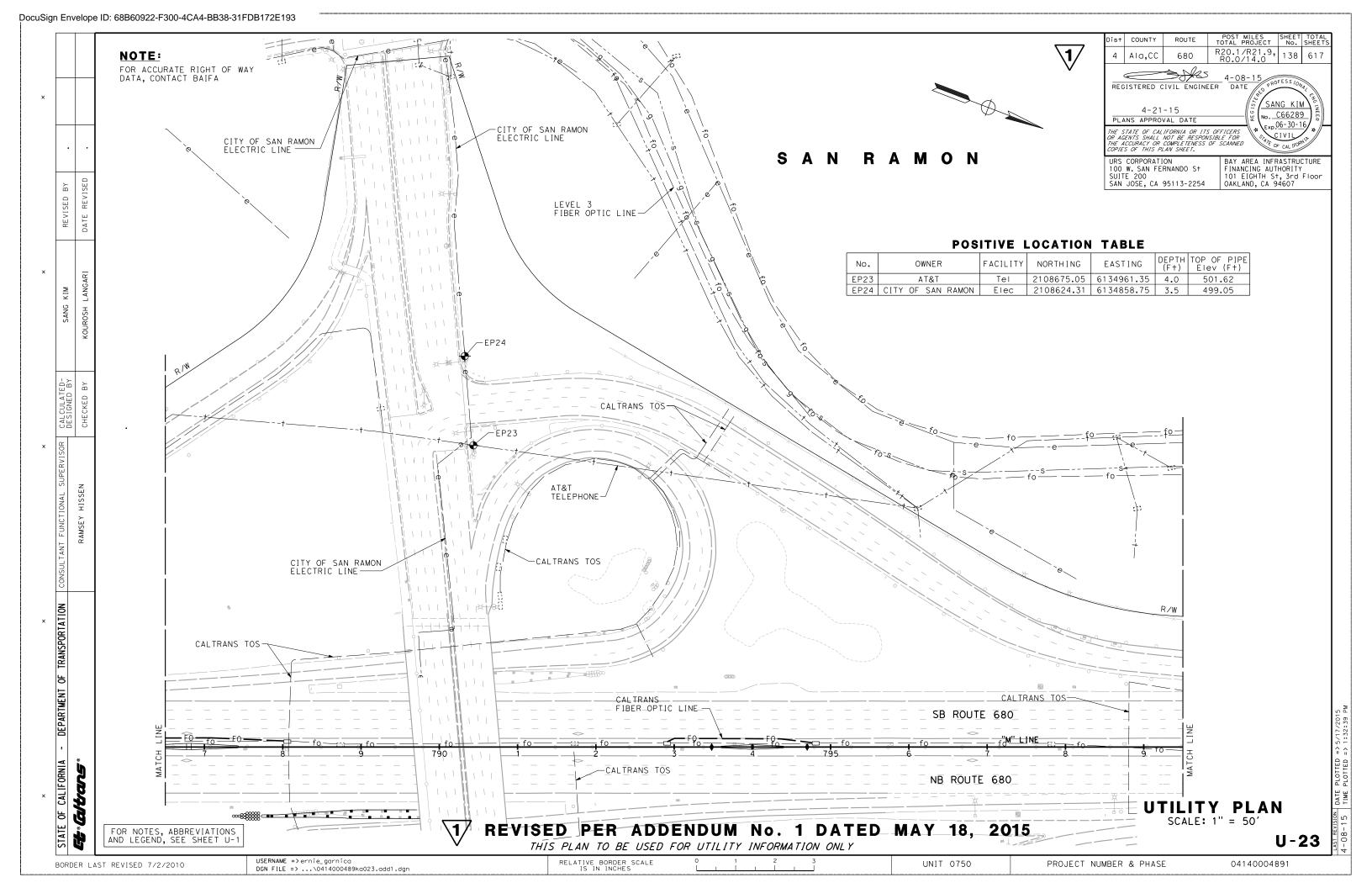
PROJECT NUMBER & PHASE

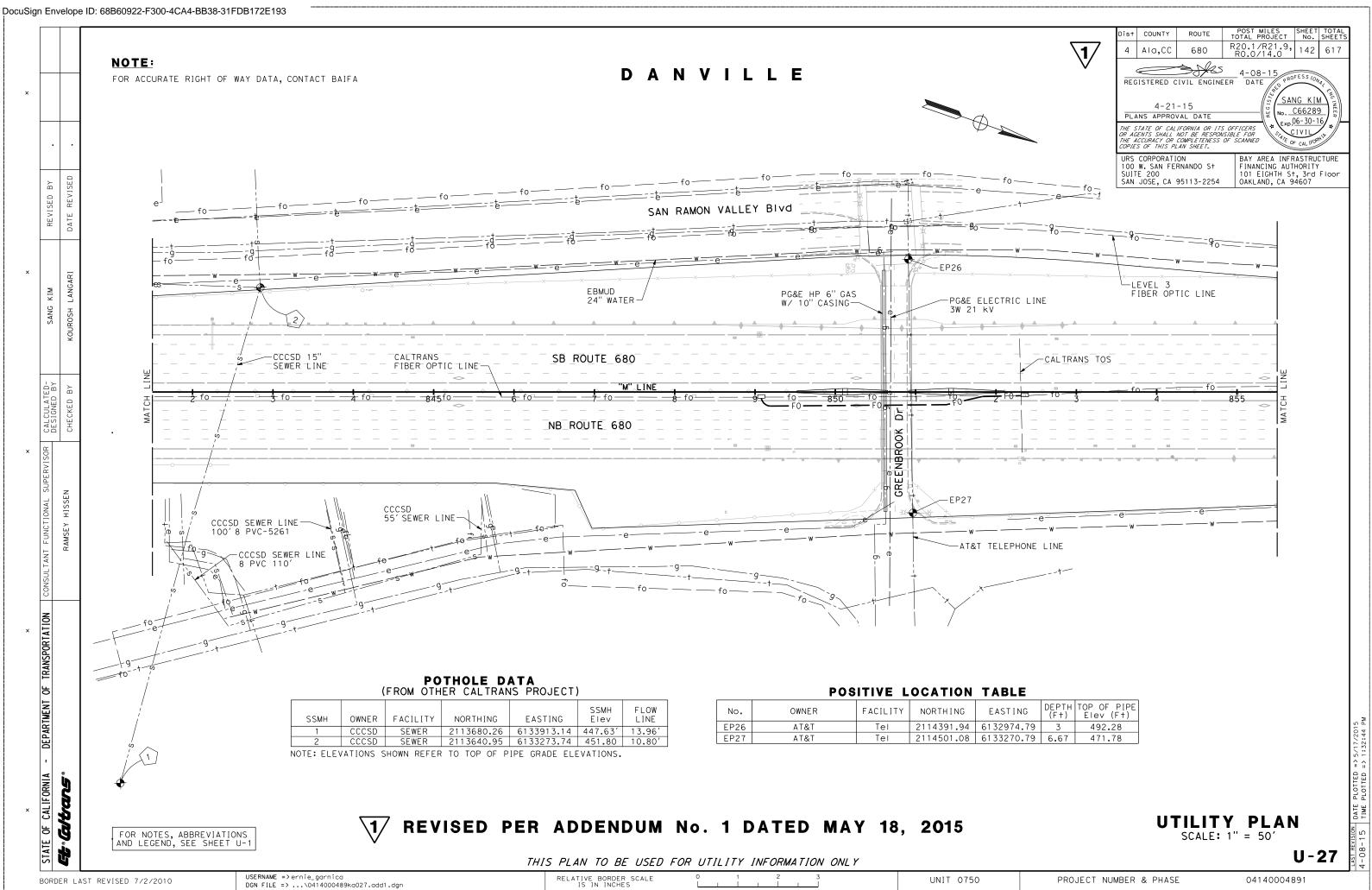
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RELATIVE BORDER SCALE IS IN INCHES









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NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT BAIFA

D A N V I L L E

Dis+ COUNTY R20.1/R21.9, 146 617 680 Ala,CC

REGISTERED CIVIL ENGINEER DATE

4-21-15 PLANS APPROVAL DATE

URS CORPORATION 100 W. SAN FERNANDO S+ SUITE 200 SAN JOSE, CA 95113-2254 BAY AREA INFRASTRUCTURE FINANCING AUTHORITY 101 EIGHTH St, 3rd Floor OAKLAND, CA 94607

THE STATE OF CALIFORNIA OR ITS OFFICERS
OR AGENTS SHALL NOT BE RESPONSIBLE FOR
HHE ACCURACY OR COMPLETENESS OF SCANNED
COPIES OF THIS PLAN SHEET.

SANG KIM

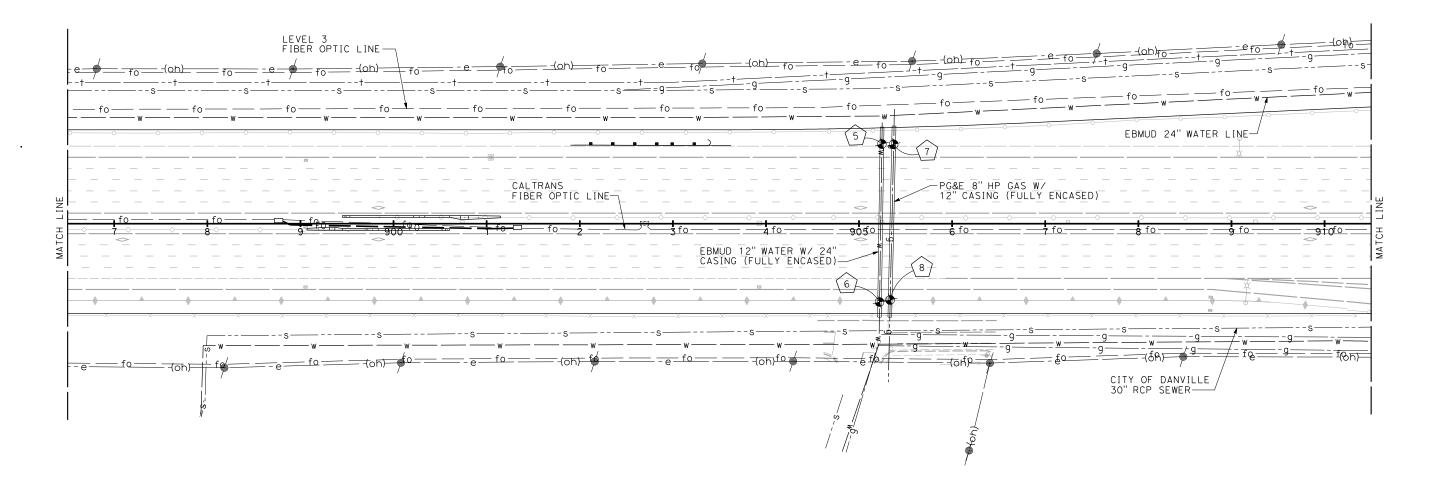
No. <u>C66289</u>

Exp.06-30-10

POTHOLE DATA (FROM OTHER CALTRANS PROJECT)

POTHOLE No.	OWNER	FACILITY	NORTHING	EASTING	GROUND Elev	DEPTH
5	EBMUD	WATER	2119411	6130952	415.63	7.83′
6	EBMUD	WATER	2119461	6131114	411.68′	5.12′
7	PG&E	GAS	2119423	6130949	414.67′	8.42′
8	PG&E	GAS	2119471	6131109	411.80′	6 . 92′

NOTE: ELEVATIONS SHOWN REFER TO TOP OF PIPE GRADE ELEVATIONS.



FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET U-1

REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN SCALE: 1" = 50'

U-31

BORDER LAST REVISED 7/2/2010

DEPARTMENT OF TRANSPORTATION

CALIFORNIA

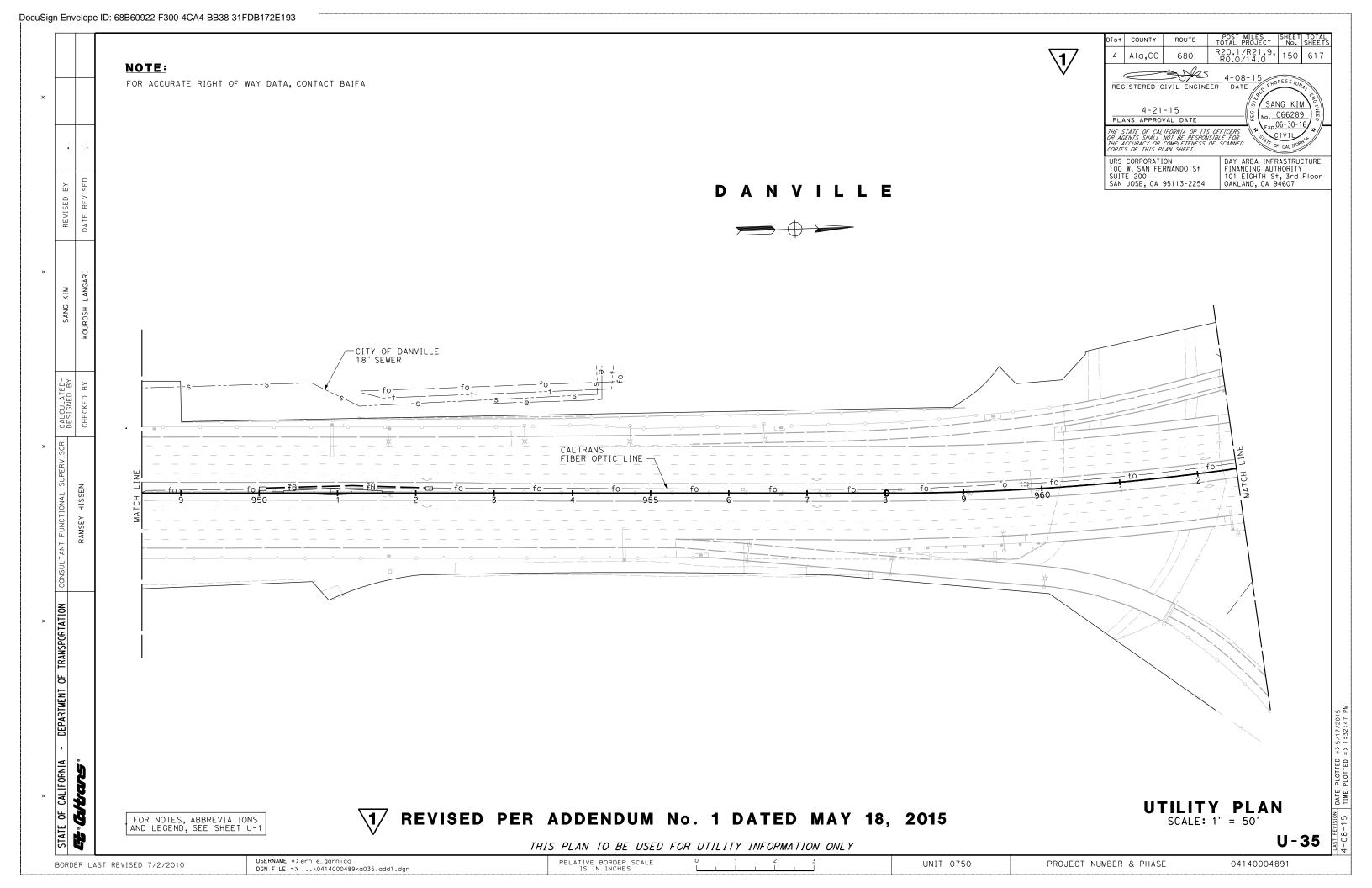
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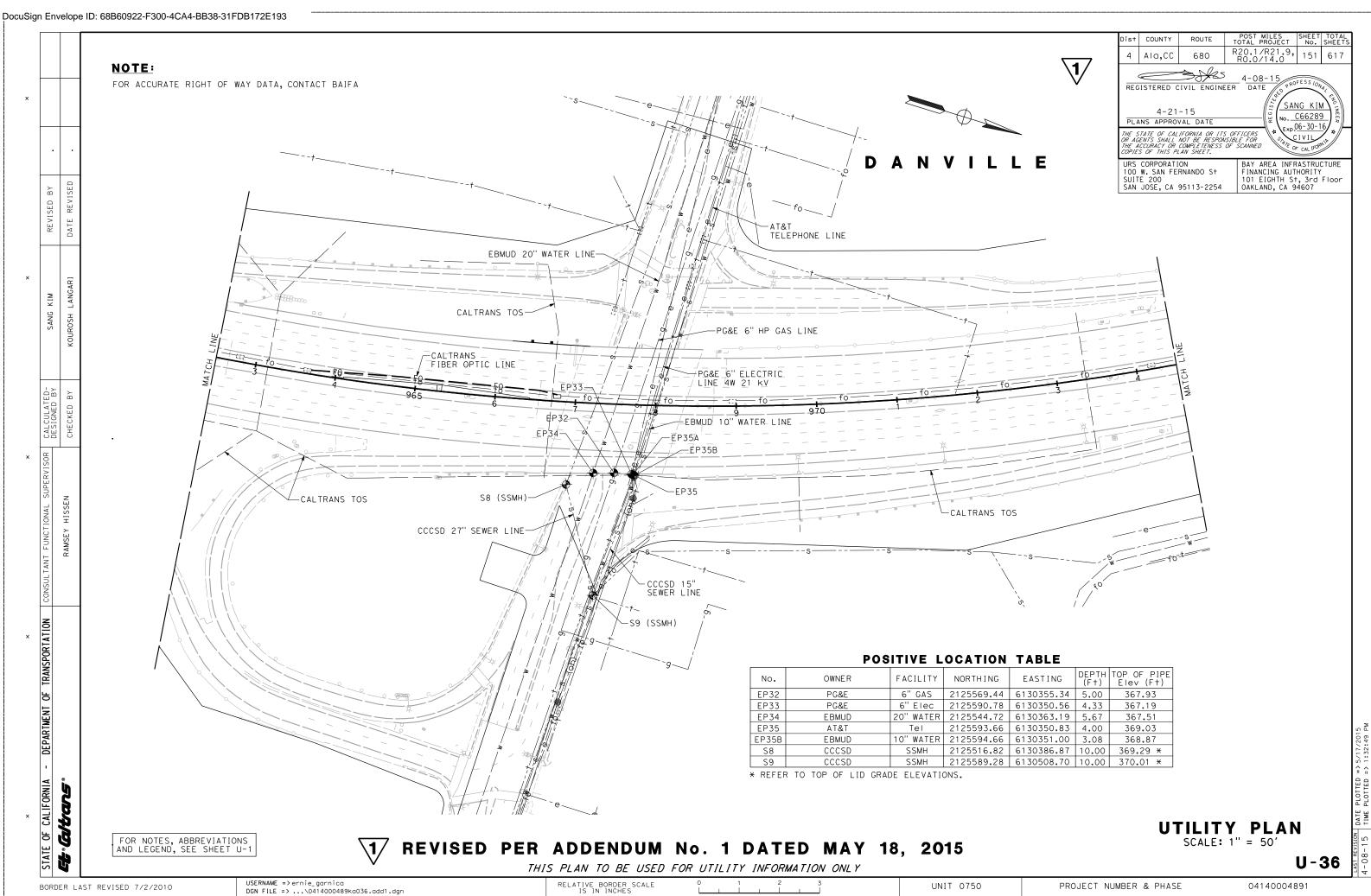
RELATIVE BORDER SCALE
IS IN INCHES

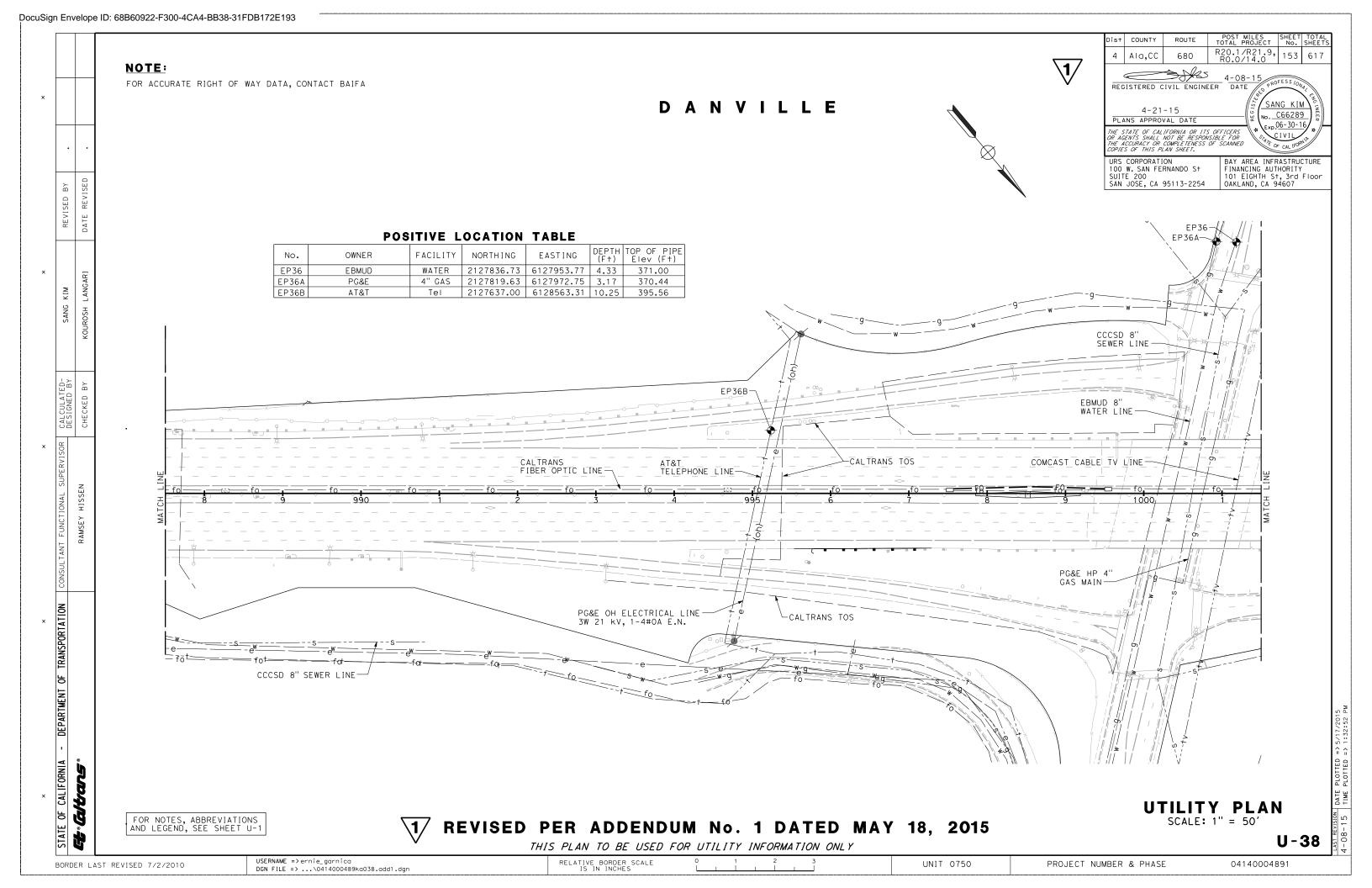
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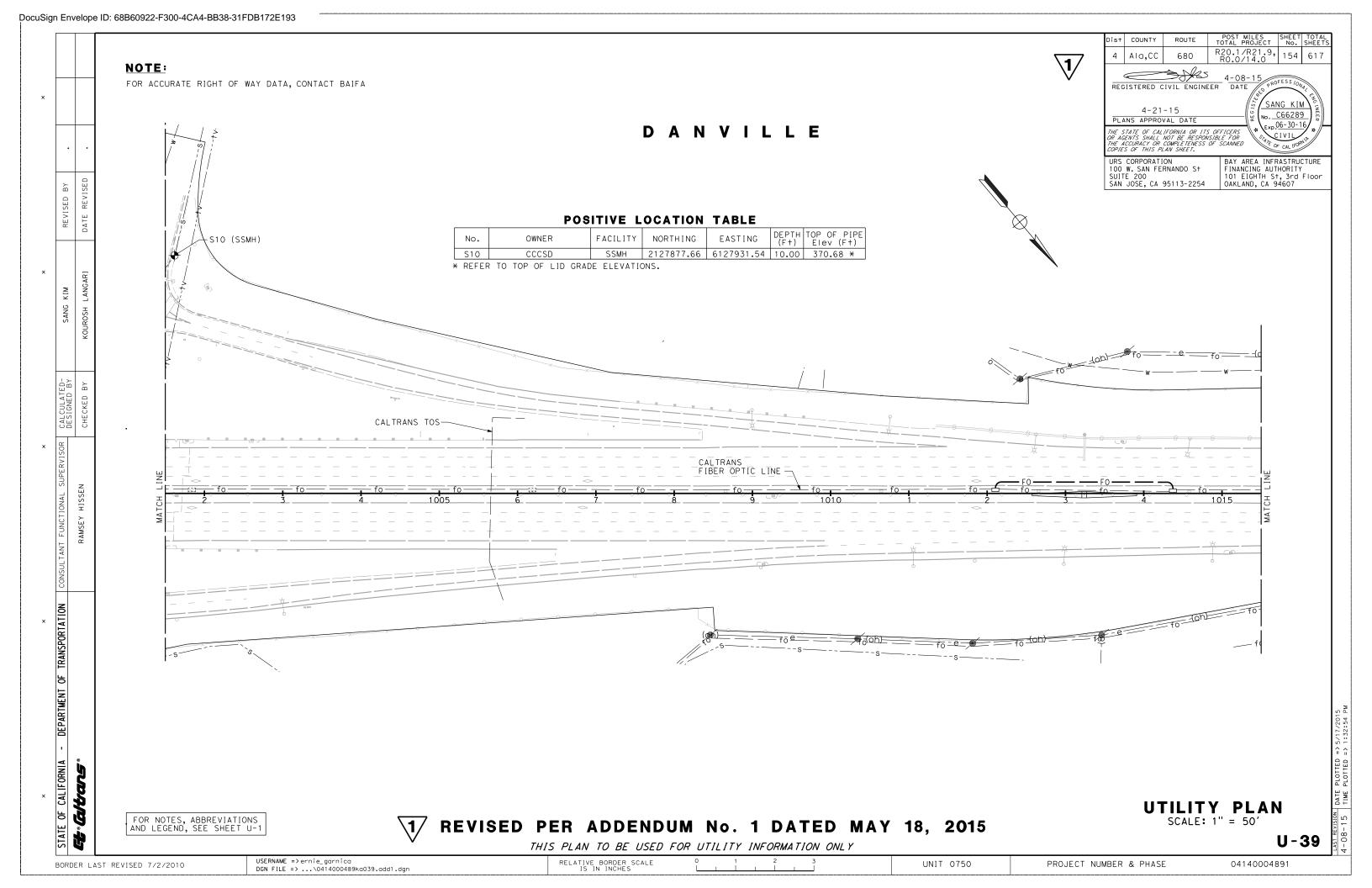
PROJECT NUMBER & PHASE

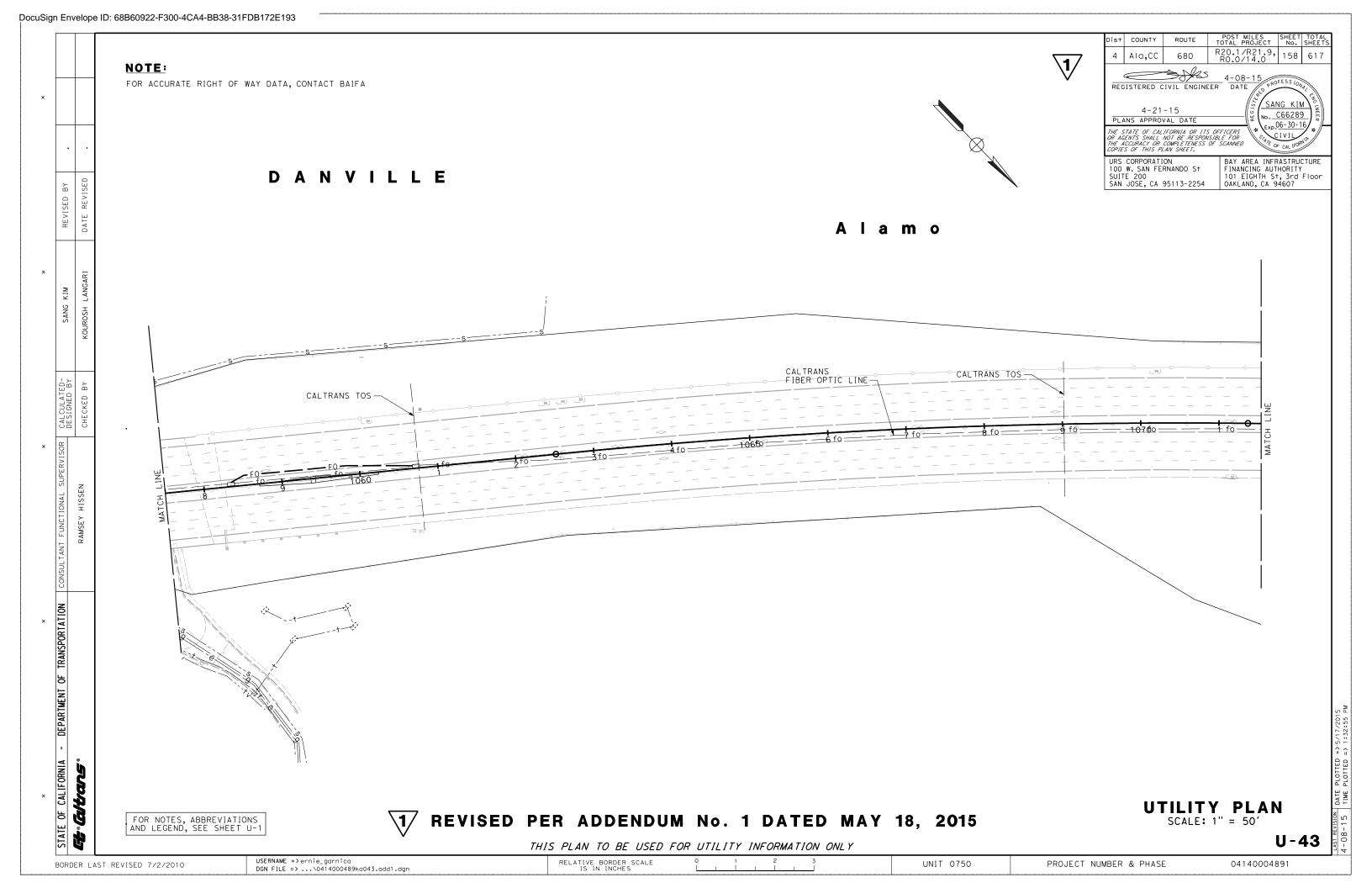
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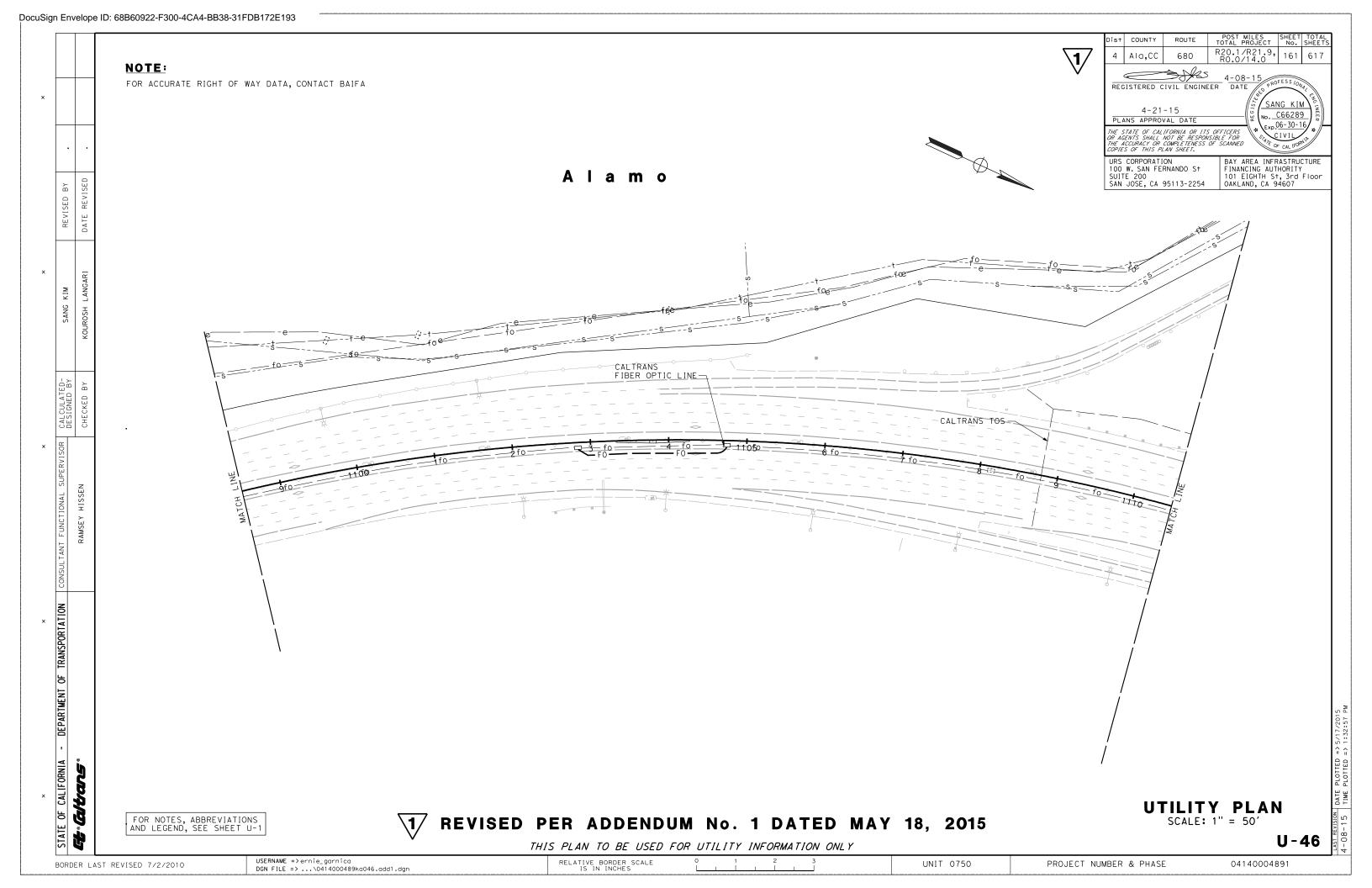


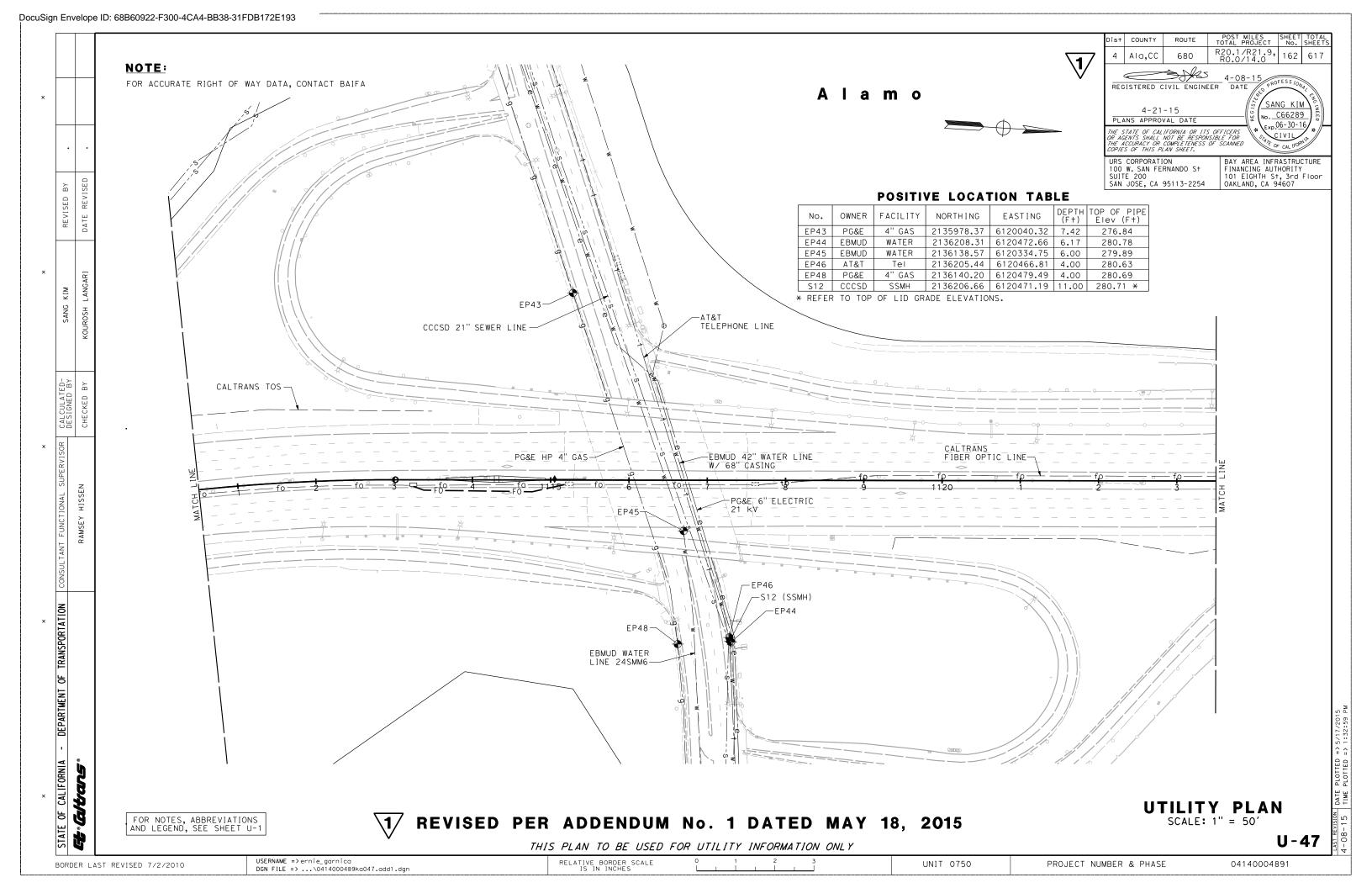


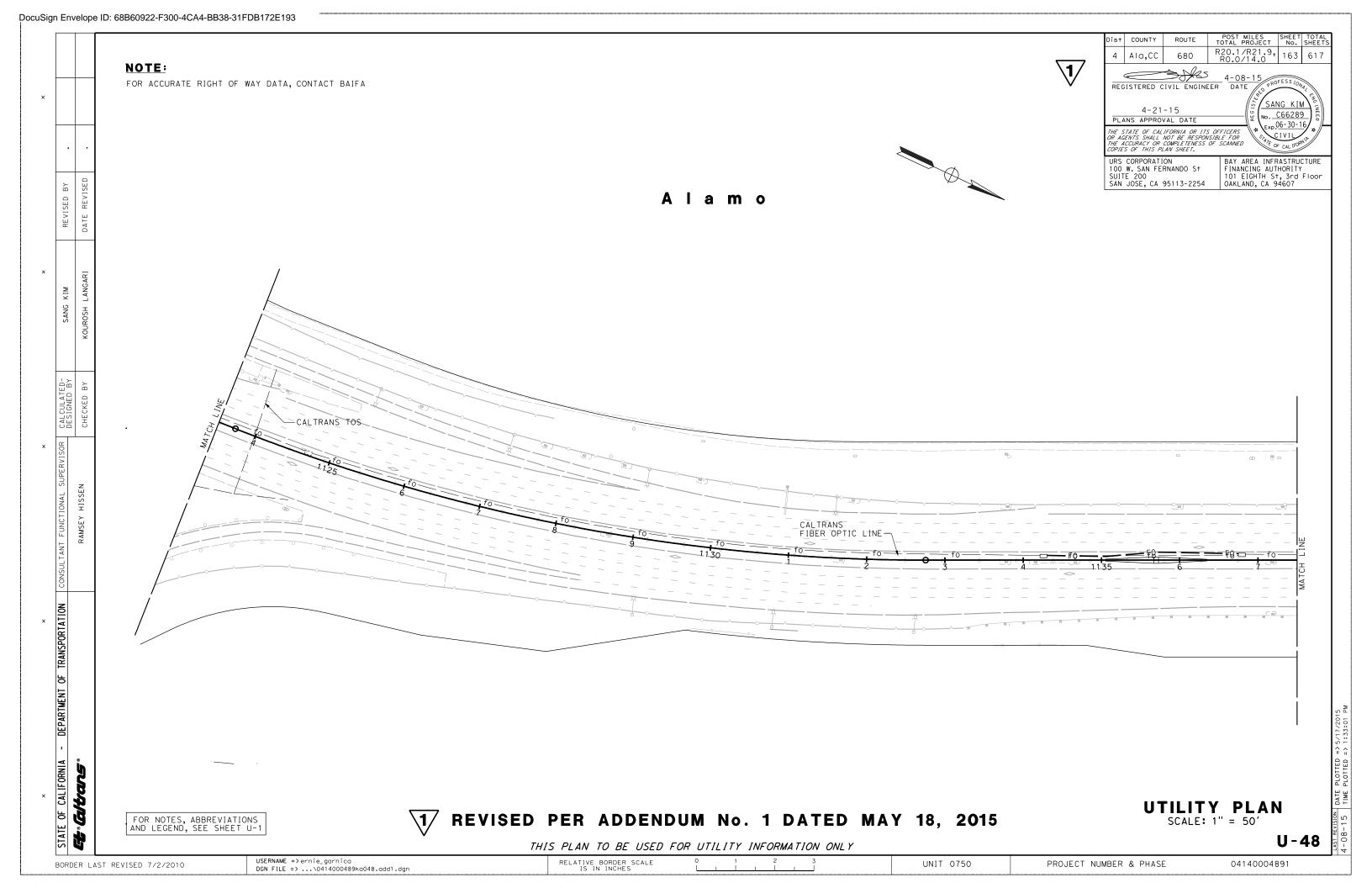


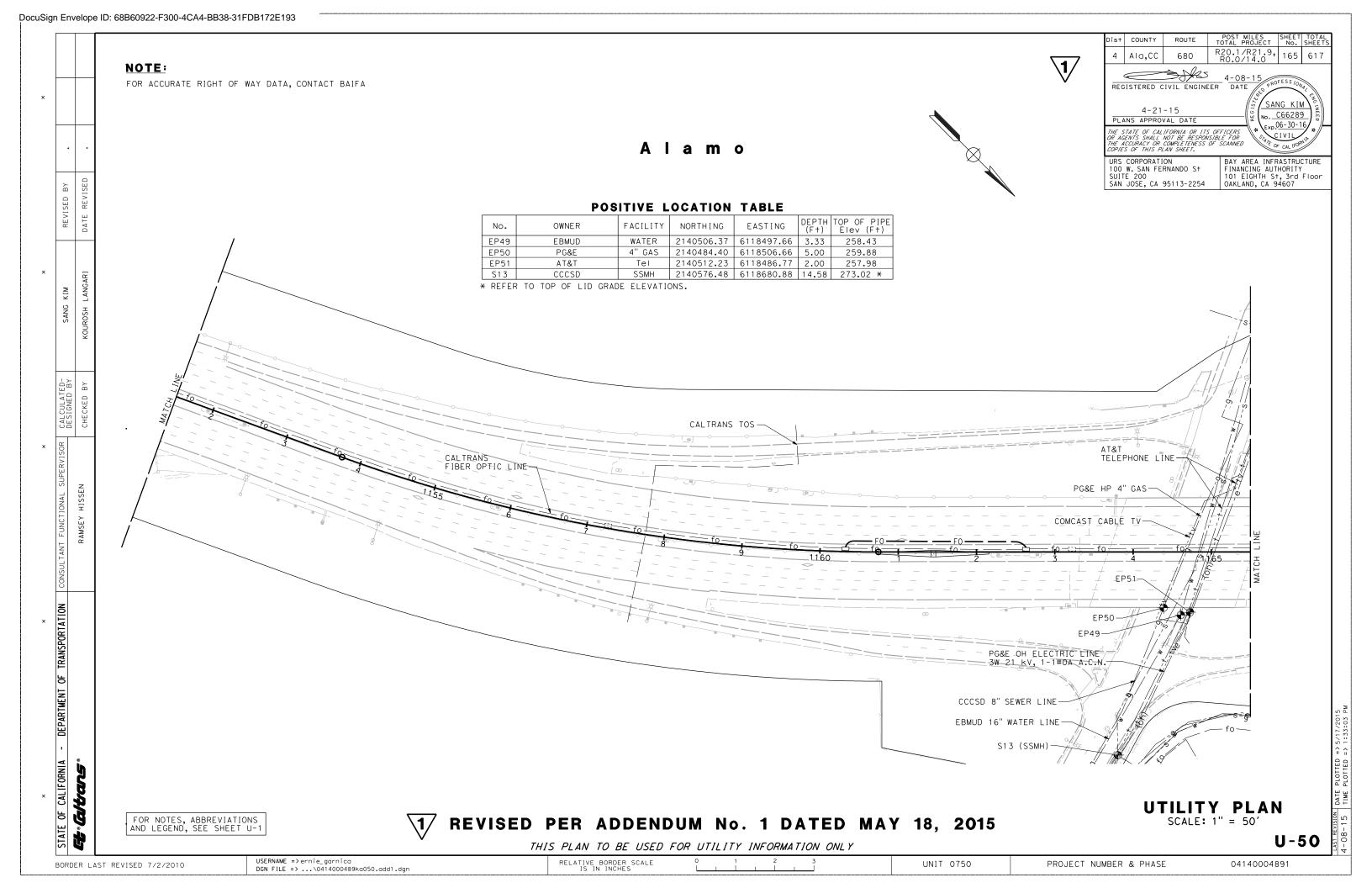


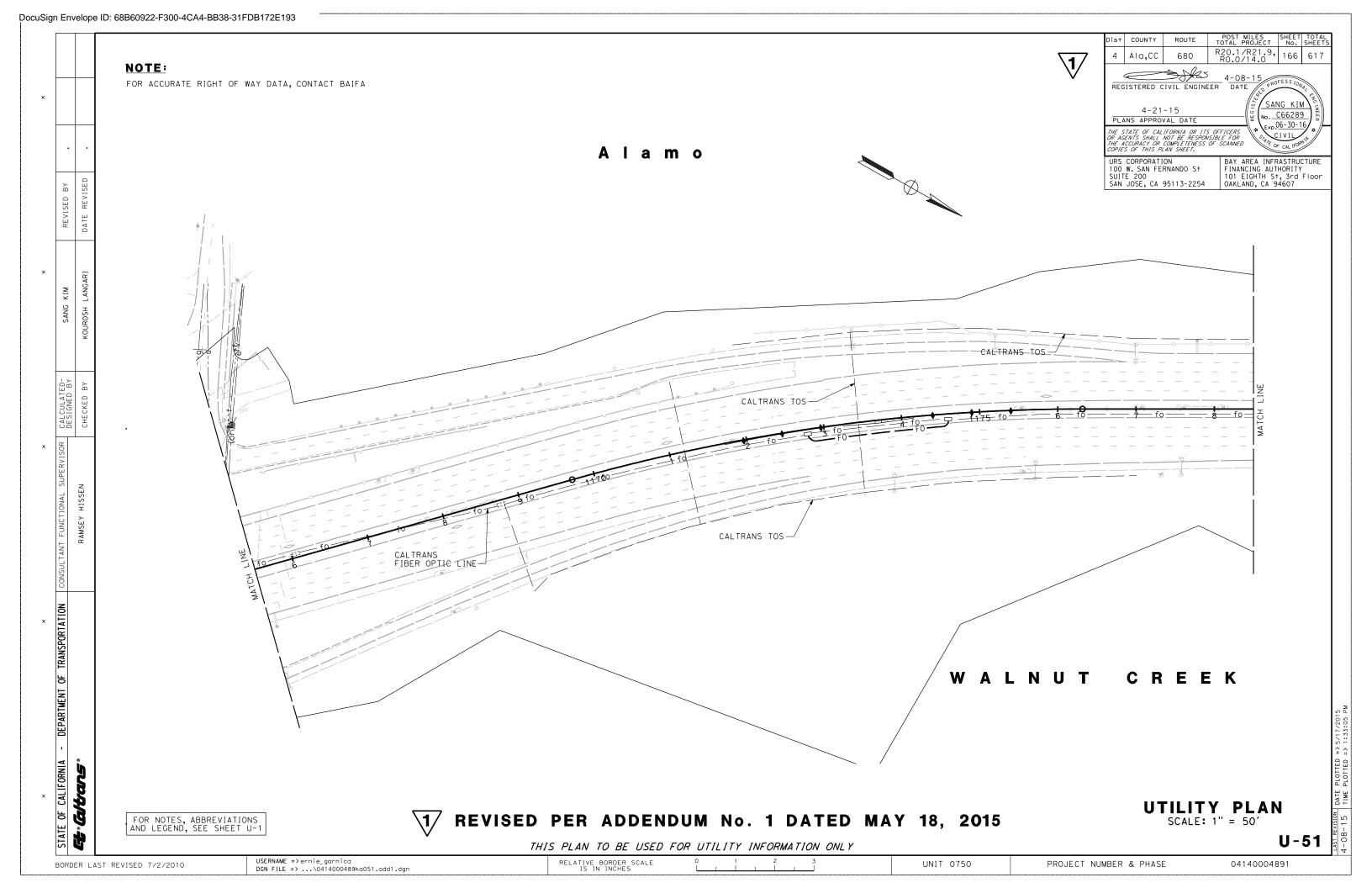


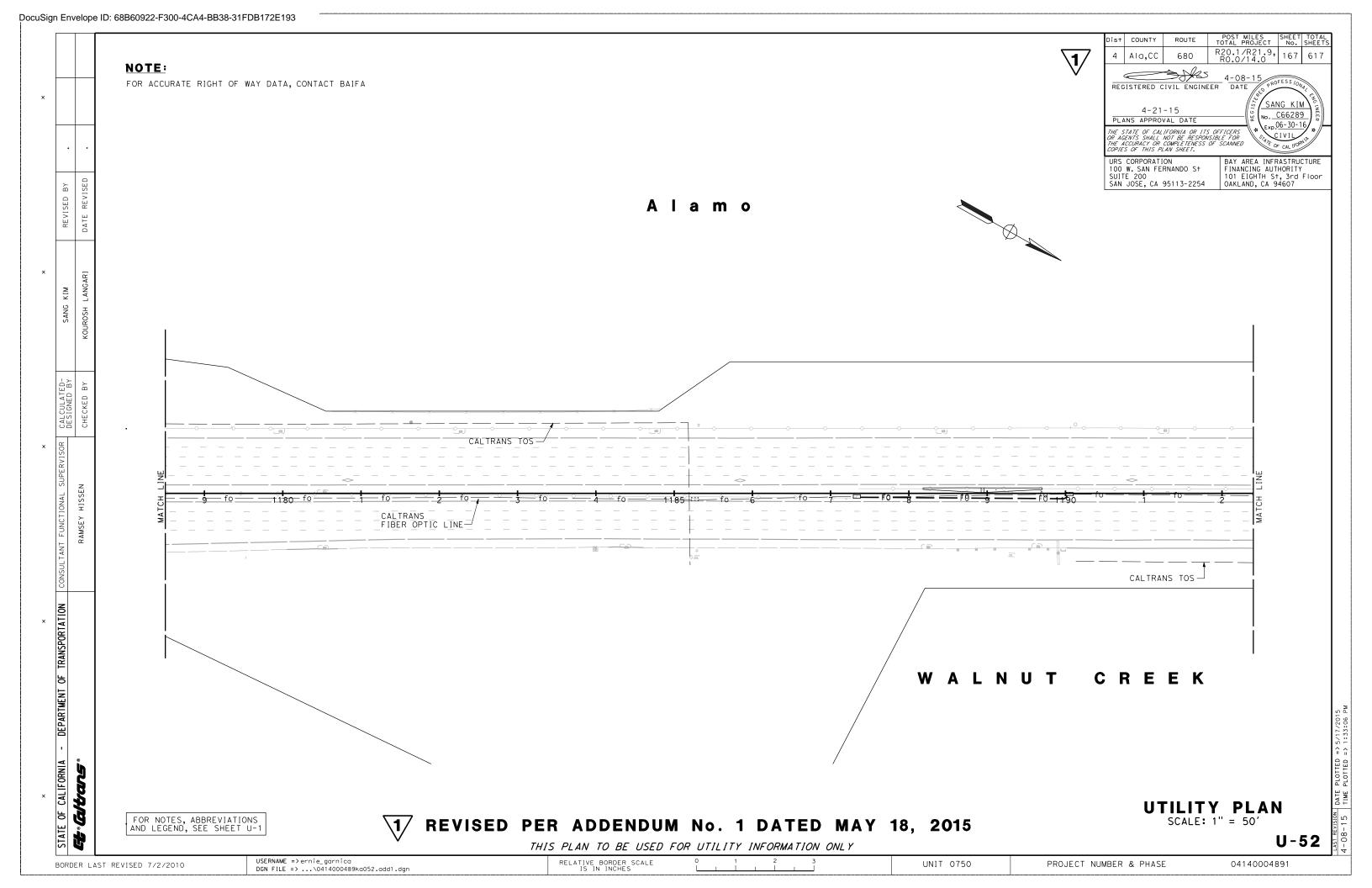


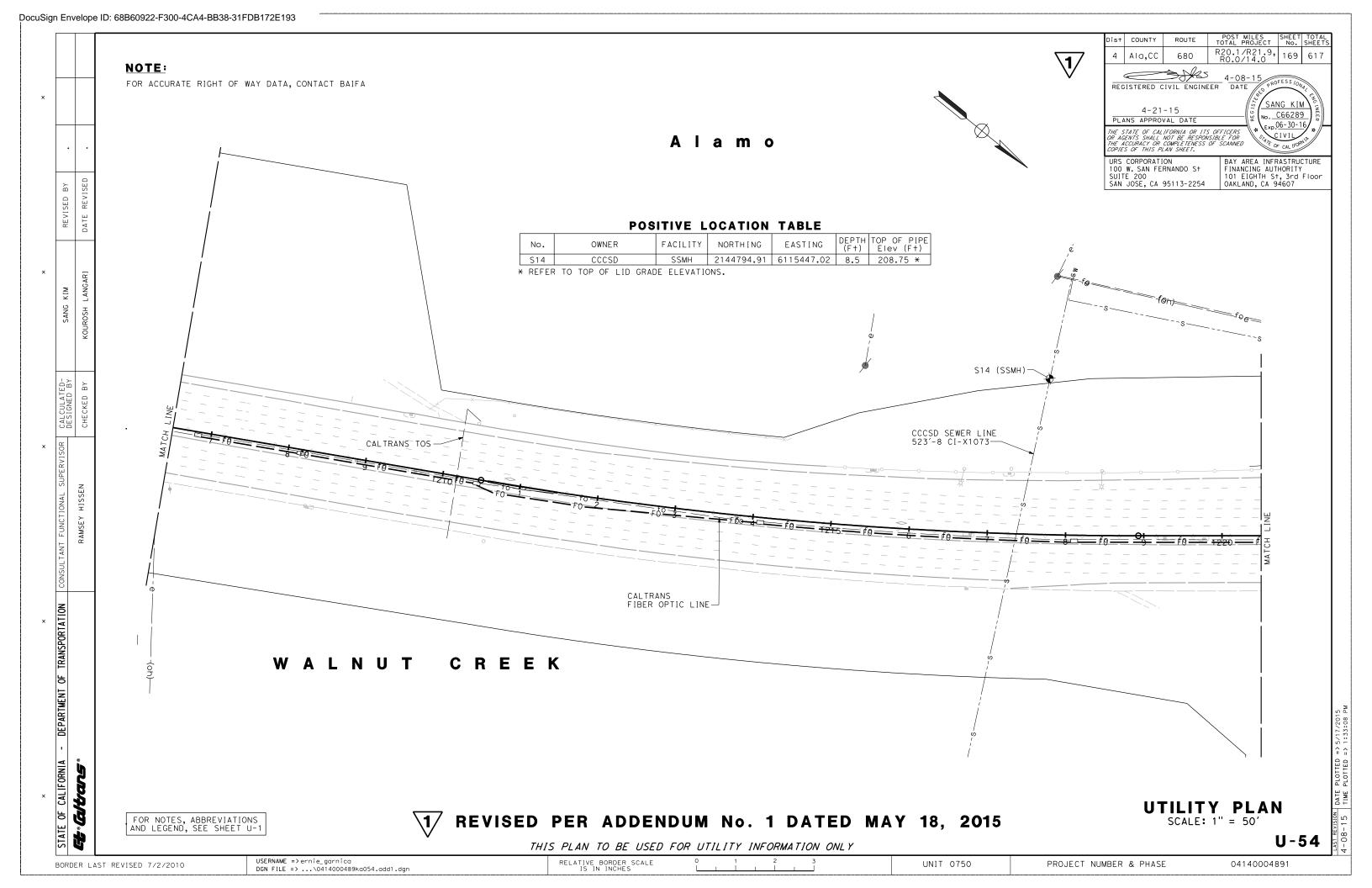


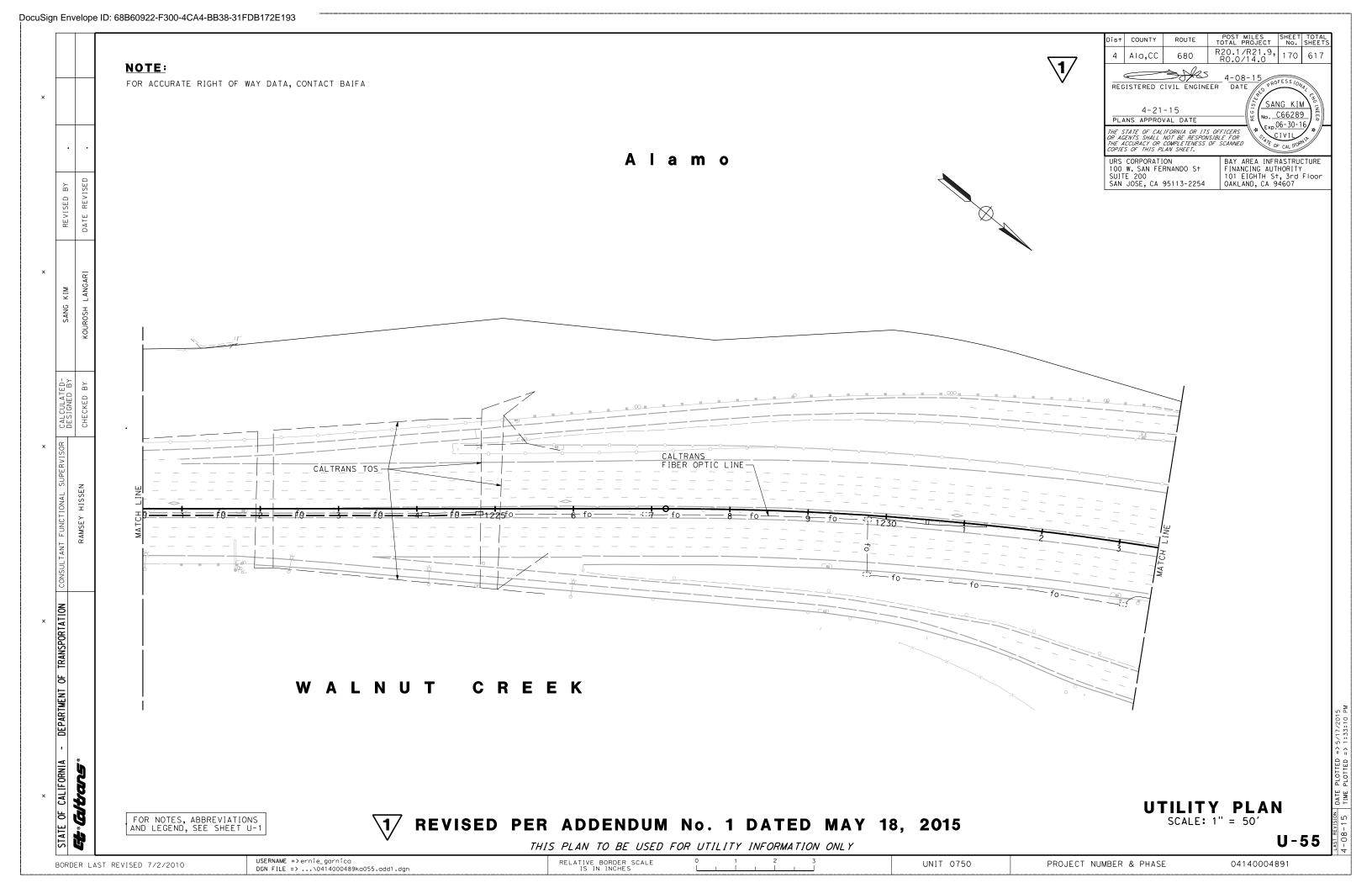












DAVID WILLIAMS

DEPARTMENT OF TRANSPORTATION

CALIFORNIA

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(CONTINUED)	STATIONARY		CONSTRUCTION CONTINUED)	AREA	SIGNS	[N]
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SHEET No.	SIGN No.	SIGN CODE	PANEL SIZE	POST SIZE	ROADSIDE SIGN	REMARKS
			IN x IN	IN x IN	ONE POST]
TH-31	TH31-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
_	TH31-2	W21-5b (R+)	48 × 48	6 × 6	×	RIGHT SHOULDER CLOSED AHEAD
	TH31-3	W21-5b (R+)	48 × 48			RIGHT SHOULDER CLOSED AHEAD
				6 × 6	×	
	TH31-4	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH31-5	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-32	TH32-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH32-2	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
TH-33	TH33-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH33-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-34	TH34-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH35-1	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
''' 33	TH35-2	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH35-3					SHOULDER CLOSED
T., 77		C30A (CA)	48 × 48			
	TH37-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-38		W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
TH-39		W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
L	TH39-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-40	TH40-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-41	TH41-1	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH41-2	C30A (CA)	48 × 48	6 × 6	×	SHOULDER CLOSED
TH-42	TH42-1	W21-5b (L+)	48 × 48	3 11 3	,,	LEFT SHOULDER CLOSED AHEAD
	TH43-1	C30A (CA)	48 × 48			SHOULDER CLOSED
	TH44-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
'''	TH44-2	C30A (CA)	48 × 48			SHOULDER CLOSED
TIL 4C						SHOULDER CLOSED SHOULDER CLOSED
1H-46	TH46-1	C3OA (CA)	48 × 48			
	TH46-2	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH46-3	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH46-4	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-47	TH47-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-48	TH48-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH48-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH48-3	C3OA (CA)	48 × 48	6 × 6	×	SHOULDER CLOSED
TH-49	TH49-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-50	TH50-1	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH50-2	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH50-3	W21-5b (R+)	48 × 48			RIGHT SHOULDER CLOSED AHEAD
TH-51	TH51-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
5.	TH51-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-52		C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH53-1	W21-5b (L+)				LEFT SHOULDER CLOSED AHEAD
			48 × 48			
	TH53-2	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH53-3	W21-5b (R+)	48 × 48	6 × 6	X	RIGHT SHOULDER CLOSED AHEAD
TH-54		C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH54-2	C3OA (CA)	48 × 48	6 × 6	X	SHOULDER CLOSED
TH-57	TH57-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH57-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-58		W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH58-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-59	TH59-1	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
	TH59-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH59-3	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-60	TH60-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
TH-61	TH61-1	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH61-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH61-3	W21-5b (L+)	48 × 48			LEFT SHOULDER CLOSED AHEAD
TH-62		C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH62-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH62-3	R2-12	36 × 54			END WORK ZONE SPEED LIMIT
	TH62-4	R2-12	36 x 54			END WORK ZONE SPEED LIMIT
TH-63		R86-3 (CA)	36 x 54			LEFT LANE HOV 2+ ONLY, 5-9AM, 3-7PM, MON-FRI
				6 6	.,	i i i
177-04	TH64-1	C30A (CA)	48 × 48	6 × 6	X	SHOULDER CLOSED
	TH64-2	C3OA (CA)	48 × 48			SHOULDER CLOSED
	TH64-3	W24-1	48 × 48			DOUBLE REVERSE CURVE (1 LANE)
	TH64-4	W24-1cP	30 x 24			ALL LANES
	TH64-5	G20-5aP	36 × 24	6 × 6	X	WORK ZONE (PLAQUE)

[N] = NOTE FOR SEPARATE PAY ITEM, FOR INFORMATION ONLY



REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

Dist	COUNTY	ROUTE	POST MILES SHEET TOTAL TOTAL PROJECT No. SHEETS				
4	Ala,CC	680	R20.1/R21.9, 275 617 R0.0/14.0				
<u> </u>	REGISTERED CIVIL ENGINEER DATE 4-21-15 PLANS APPROVAL DATE A-08-15 PLANS APPROVAL DATE 4-08-15 PROFESS 10NAZ ROBERT PADERNA NO. C73262 Exp. 12-31-16						
OR AC THE A	THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.						
100 SUIT	CORPORATI W. SAN FE E 200 JOSE, CA		BAY AREA INFRASTRUCTURE FINANCING AUTHORITY 101 EIGHTH St, 3rd Floor OAKLAND, CA 94607				

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS [N] (CONTINUED)

	ANLA	SIGNS LIVE	10011			,
SHEET No.	SIGN No.	SIGN CODE	PANEL SIZE	POST SIZE	ROADSIDE SIGN ONE POST	REMARKS
	TH64-6	R2-1(55)	48 × 60	6 × 6	×	SPEED LIMIT
TIL CA	TH64-7	W21-5b (R+)	48 × 48	0 x 0	^	RIGHT SHOULDER CLOSED AHEAD
1H-64				6 4 6	.,	SHOULDER WORK
	TH64-8	W21-5	48 x 48	6 x 6	×	RIGHT SHOULDER CLOSED AHEAD
	TH64-9	W21-5b (Rt)	48 × 48	6 × 6	×	
	TH64-10	W21-5b (L+)	48 x 48			LEFT SHOULDER CLOSED AHEAD DOUBLE REVERSE CURVE (1 LANE)
	TH64-11	W24-1	48 × 48			ALL LANES
	TH64-12	W24-1cP W24-1	30 x 24	\1/		DOUBLE REVERSE CURVE (1 LANE)
			48 x 48	\'/		ALL LANES
	TH64-14	W24-1cP	30 x 24	V		
		W21-5 W7-3aP (16 MILES)	48 × 48 24 × 18			SHOULDER WORK
	TH64-16		36 x 24			NEXT 16 MILES WORK ZONE (PLAQUE)
	TH64-17	G20-5aP R2-1(55)	48 × 60			SPEED LIMIT
	TH64-19	G20-5aP	36 x 24			WORK ZONE (PLAQUE)
	TH64-20	R2-1(55)	48 × 60			SPEED LIMIT
	TH64-21	W3-5 (55)	48 × 48			REDUCED SPEED LIMIT AHEAD (55)
	TH64-22	W3-5 (55)	48 × 48			REDUCED SPEED LIMIT AHEAD (55)
TH-66	TH66-1	W4-2 (R+)	48 × 48	6 x 6	×	(RIGHT) LANE ENDS
111 00	TH66-2	C20 (CA)(R+)	48 × 48	6 × 6	×	(RIGHT) LANE CLOSED AHEAD
TH-67	TH67-1	W20-1	36 × 36	6 × 6	×	ROAD WORK AHEAD
	TH67-2	C20 (CA)(L+)	36 × 36	6 × 6	×	(LEFT) LANE CLOSED AHEAD
	TH67-3	C23 (CA)	36 × 36	6 × 6	×	RAMP WORK AHEAD
	TH67-4	C23 (CA)	36 × 36	6 × 6	×	RAMP WORK AHEAD
	TH67-5	W4-2 (L+)	36 × 36	6 × 6	×	(LEFT) LANE ENDS
	TH67-6	SC11 (CA)	42 × 30	6 × 6	×	LANE CLOSED
TH-68	TH68-1	W20-1	36 × 36	6 × 6	×	ROAD WORK AHEAD
	TH68-2	C20 (CA)(R+)	36 × 36	6 × 6	×	(RIGHT) LANE CLOSED AHEAD
	TH68-3	C23 (CA)	36 × 36	6 × 6	×	RAMP WORK AHEAD
	TH68-4	C23 (CA)	36 × 36	6 x 6	×	RAMP WORK AHEAD
	TH68-5	W4-2 (R+)	36 × 36	6 × 6	×	(RIGHT) LANE ENDS
	TH68-6	SC11 (CA)	42 × 30	6 x 6	×	LANE CLOSED
TH-69	TH69-1	R9-11 (R+)	24 × 18	6 × 6	×	SIDEWALK CLOSED AHEAD CROSS HERE
	TH69-2	R9-9	24 × 12	6 × 6	×	SIDEWALK CLOSED
	TH69-3	R9-9	24 x 12	6 x 6	×	SIDEWALK CLOSED
	TH69-4	R9-11 (L+)	24 × 18	6 x 6	×	SIDEWALK CLOSED AHEAD CROSS HERE
	TH69-5	CUSTOM	24 x 12	6 x 6	×	BUS STOP OPEN
TH-70	TH70-1	R9-9	24 × 12	6 × 6	×	SIDEWALK CLOSED
	TH70-2	R9-9	24 x 12	6 x 6	×	SIDEWALK CLOSED
	TH70-3	W11-1	30 × 30	6 × 6	×	BICYCLE
	TH70-4	W16-1P	18 × 24	6 × 6	×	SHARE THE ROAD
	TH70-5	W20-1	36 × 36	6 × 6	×	ROAD WORK AHEAD
TH-71	TH71-1	W20-1	36 x 36	6 × 6	×	ROAD WORK AHEAD
	TH71-2	W23-2	36 × 36	6 × 6	×	NEW TRAFFIC PATTERN AHEAD
	TH71-3	W20-1	36 × 36	6 × 6	×	ROAD WORK AHEAD
TH-72	TH72-1	W20-1	36 × 36	6 × 6	×	ROAD WORK AHEAD
	TH72-2	W20-4	36 × 36	6 × 6	×	ONE LANE ROAD
	TH72-3	C9A (CA)	36 × 36	6 × 6	×	FLAGGER
	TH72-4	C9A (CA)	36 × 36	6 × 6	×	FLAGGER
		SHEET TO	TAL OF	THQ-3	44	

[N] = NOTE FOR SEPARATE PAY ITEM, FOR INFORMATION ONLY

TRAFFIC HANDLING QUANTITIES

THQ-3

APPROVED FOR TRAFFIC HANDLING WORK ONLY

USERNAME =>ernie_garnica
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IS IN INCHES UNIT 0750 PROJECT NUMBER & PHASE 04140004891 BORDER LAST REVISED 7/2/2010

POST MILES SHEET TOTAL TOTAL PROJECT No. SHEET ROUTE R20.1/R21.9, 463 617 680 Pohert Padena 4-08-15
REGISTERED CIVIL ENGINEER DATE ROBERT PADERNA 4-21-15 No. <u>C73262</u> PLANS APPROVAL DATE Exp.12-31-16 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED CIVIL COPIES OF THIS PLAN SHEET URS CORPORATION BAY AREA INFRASTRUCTURE 100 W. SAN FERNANDO S+ FINANCING AUTHORITY 101 EIGHTH St. 3rd Floor SAN JOSE, CA 95113-2254 OAKLAND, CA 94607

CONDUIT IS SHOWN SCHEMATICALLY AND SHALL BE INSTALLED

INSTALL 4" DIAMETER NPS XS SIGN POST WITH CAP FOR FUTURE VES CAMERA. SEE CONSTRUCTION DETAIL SHEETS. SIGN POST SHALL BE MOUNTED 11' ABOVE FINISHED GRADE. VES CAMERA TO BE INSTALLED BY SYSTEM INTEGRATOR AS PART OF SEPARATE CONTRACT.

3"C, 2#8 (240 V LTG), 3#14 (120 V PEU). ALL CONDUCTORS ARE PART OF BID ITEM "LIGHTING (BAIFA)".

3"C, 4#4 (240 V LTG), 3#14 (120 V PEU). ALL CONDUCTORS ARE PART OF BID ITEM "LIGHTING (BAIFA)".

3"C, 2#6 (240 V LTG), 3#14 (120 V PEU). ALL CONDUCTORS ARE PART OF BID ITEM "LIGHTING (BAIFA)".

SEE SHEET E-101 FOR TYPICAL CROSS SECTION AND PROFILE FOR CONDUIT INSTALLATION UNDER SOUNDWALL.

SEE DETAIL ON SHEET E-101 FOR CONDUIT INSTALLATION

CONTRACTOR TO CONTACT WOODBINE HOMEOWNER'S ASSOCIATION AT (925) 830-4848 PRIOR TO COMMENCEMENT OF WORK ADJACENT

THIS WORK TO BE DONE BY OTHERS (EA NO. 04-2J330).

INSTALL 78" x 102" FOUNDATION PAD FOR FUTURE ETS HUB CABINET. SEE SHEET E-100 FOR PAD DIMENSIONS AND CONDUIT ENTRY. CABINET TO BE INSTALLED BY SYSTEM INTEGRATOR AS PART OF

FIXED OBJECT(S) MUST BE INSTALLED 6' MINIMUM UPSTREAM FROM THE END OF MGS. SEE CALTRANS REVISED STANDARD PLAN A77R3 FOR LAYOUT. OBJECTS ARE NOT SHOWN TO SCALE.

FIXED OBJECT(S) MUST BE INSTALLED 25' MINIMUM DOWNSTREAM FROM THE BEGINNING OF MGS. SEE CALTRANS REVISED STANDARD PLAN A77R3 FOR LAYOUT. OBJECTS ARE NOT SHOWN TO SCALE.

PROTECT EXISTING CONDUITS/PULL BOX IN-PLACE.

AB EXISTING DETECTOR LOOPS IN-PLACE AND REPLACE IN-KIND.

INSTALL NO. 9 PULL BOX IN SOUTHBOUND SIDE OF CONCRETE BARRIER. IF MULTIPLE PULL BOXES ARE SHOWN, INSTALL PULL BOXES AT A MINUMUM OF 6" APART. SEE C-SHEETS FOR DETAILS.

CCTV POLE SHALL BE PLACED AT LEAST 20' FROM ELECTROLIER. SEE LIGHTING (BAIFA) PLANS FOR ELECTROLIER LOCATION.

CABINET IS TO BE INSTALLED BELOW I-680 AT LOCAL STREET LEVEL

REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

LEGEND

E-2

APPROVED FOR ELECTRICAL WORK ONLY

RELATIVE BORDER SCALE
IS IN INCHES

UNIT 0750

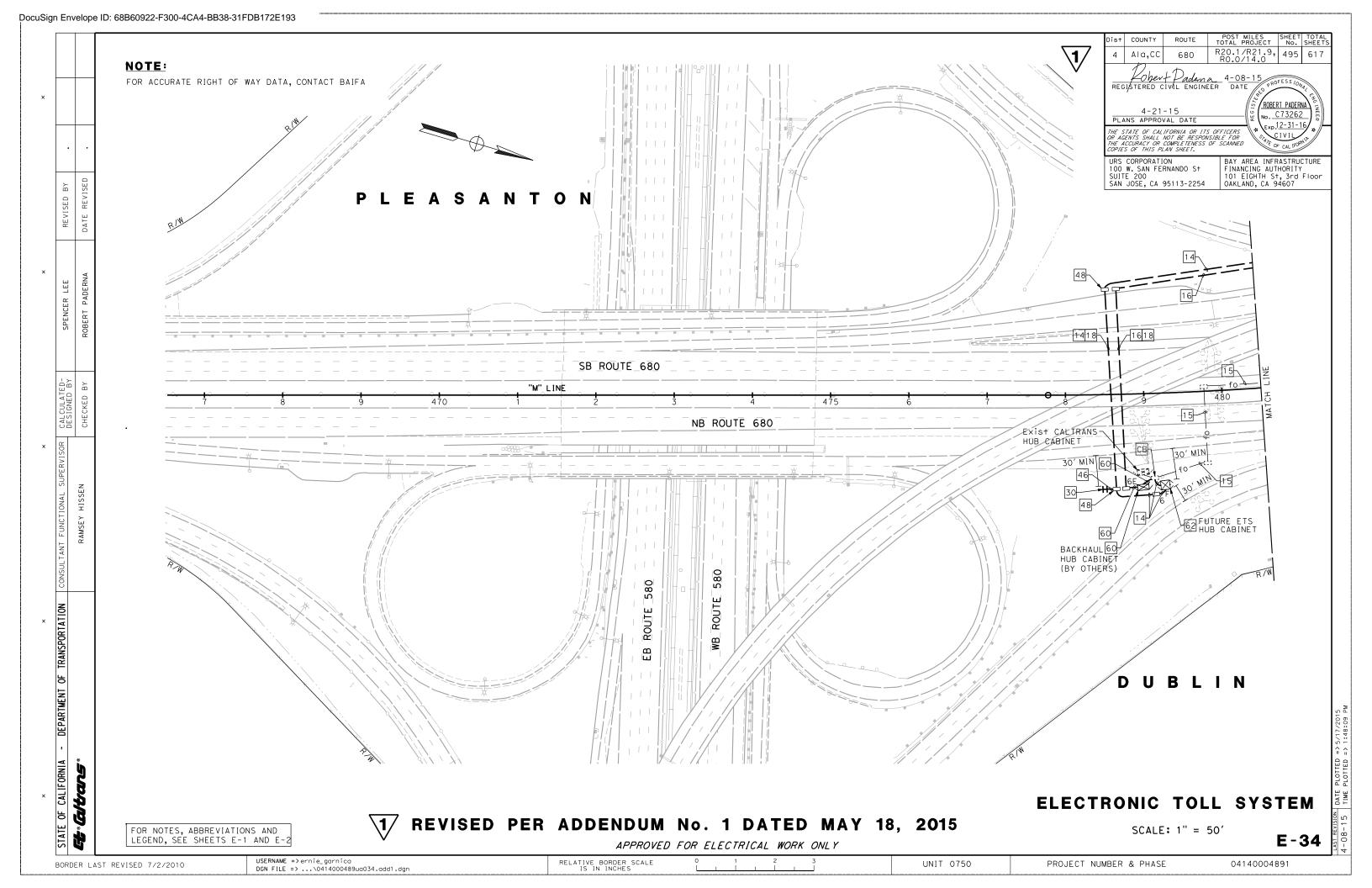
BORDER LAST REVISED 7/2/2010

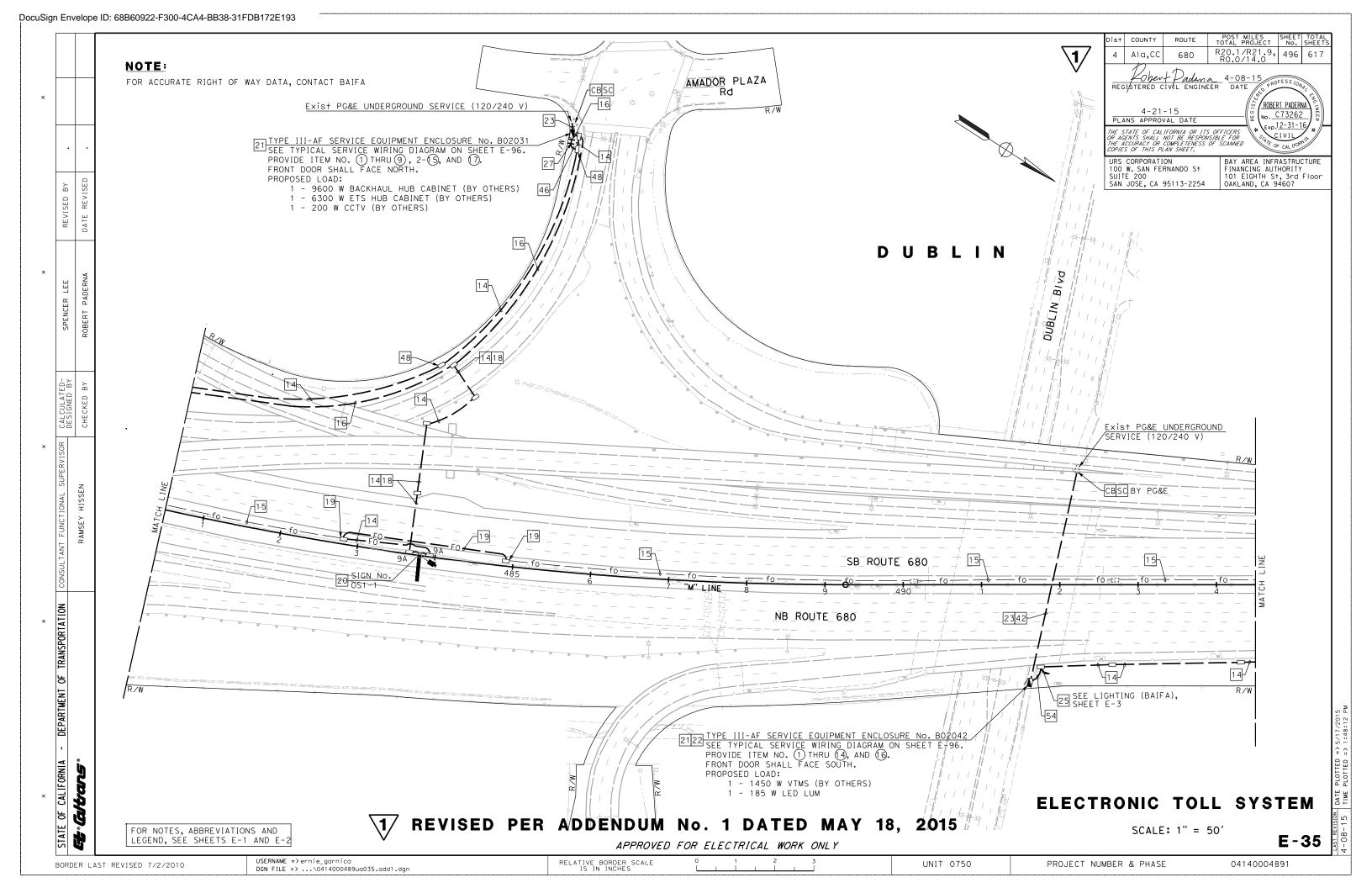
IS PART OF SEPARATE BID ITEM.

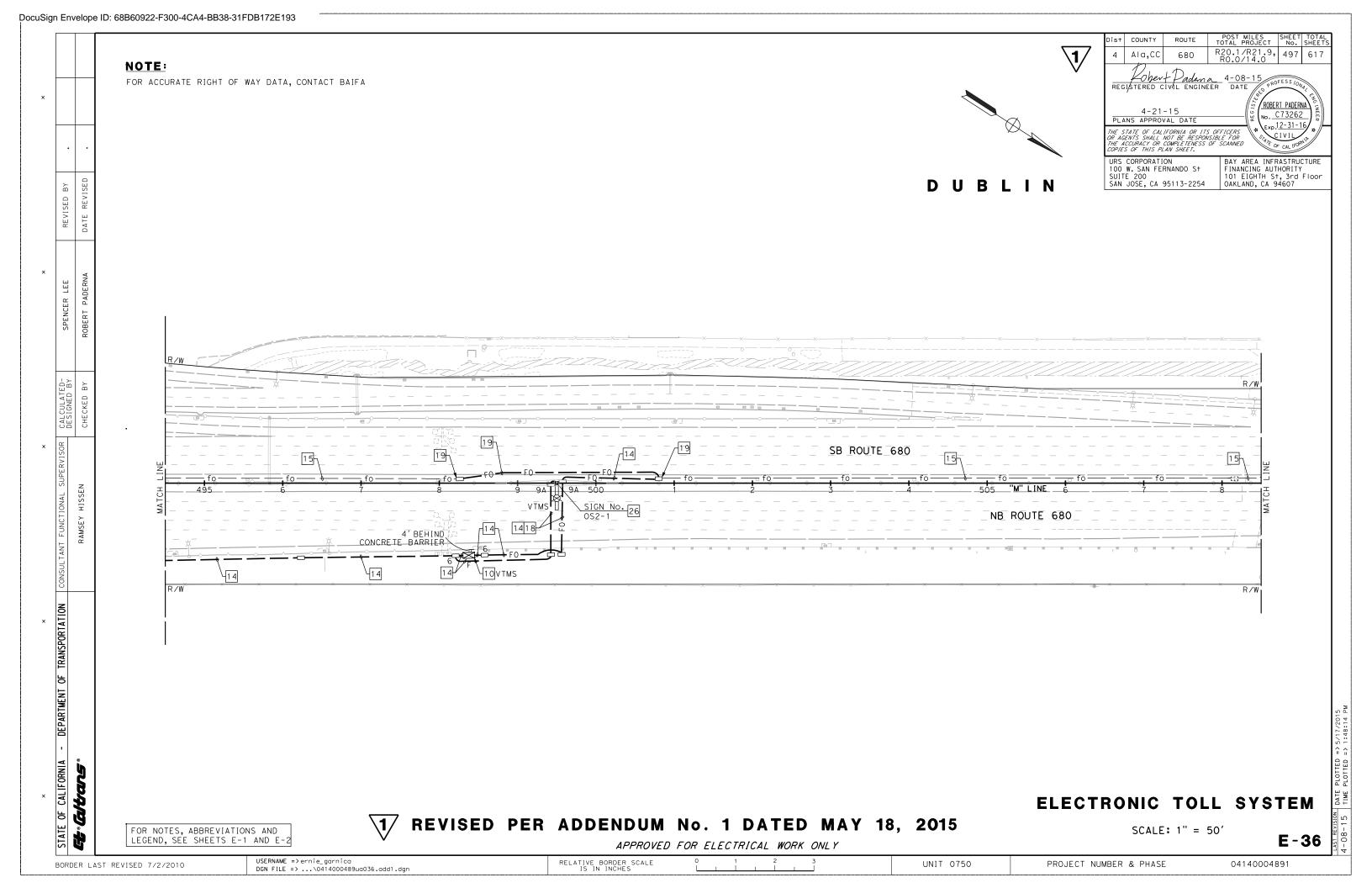
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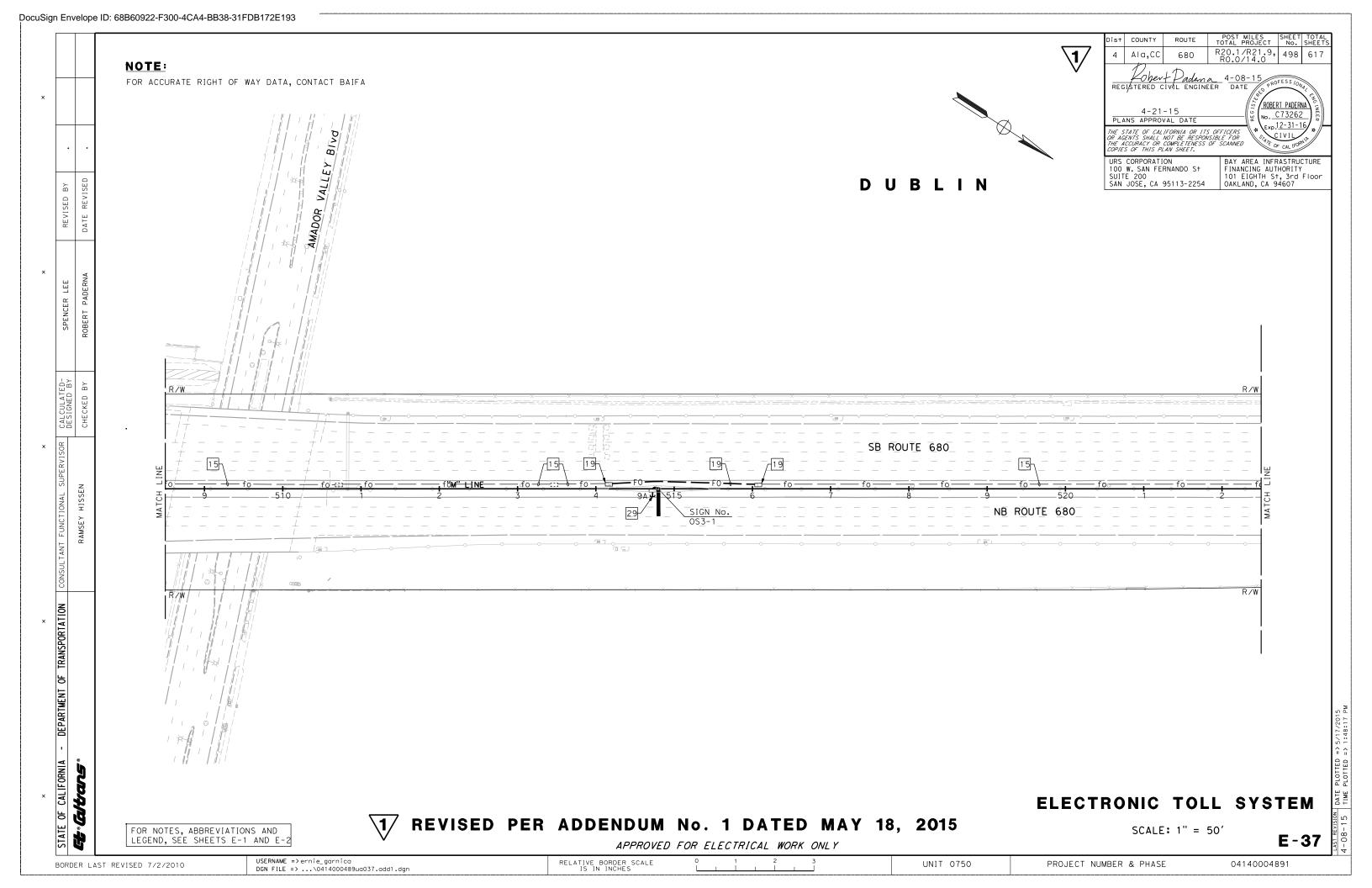
PROJECT NUMBER & PHASE

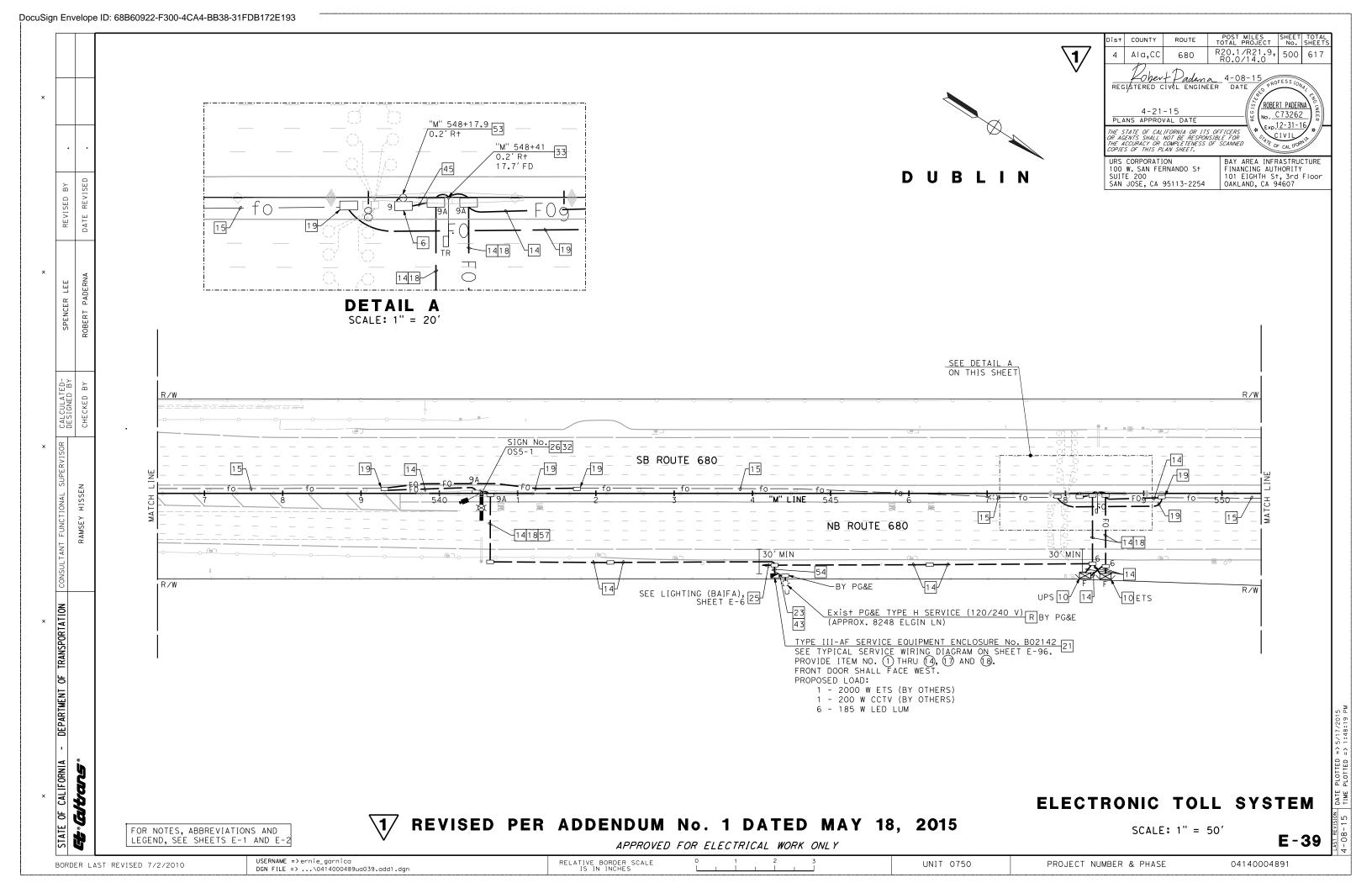
04140004891

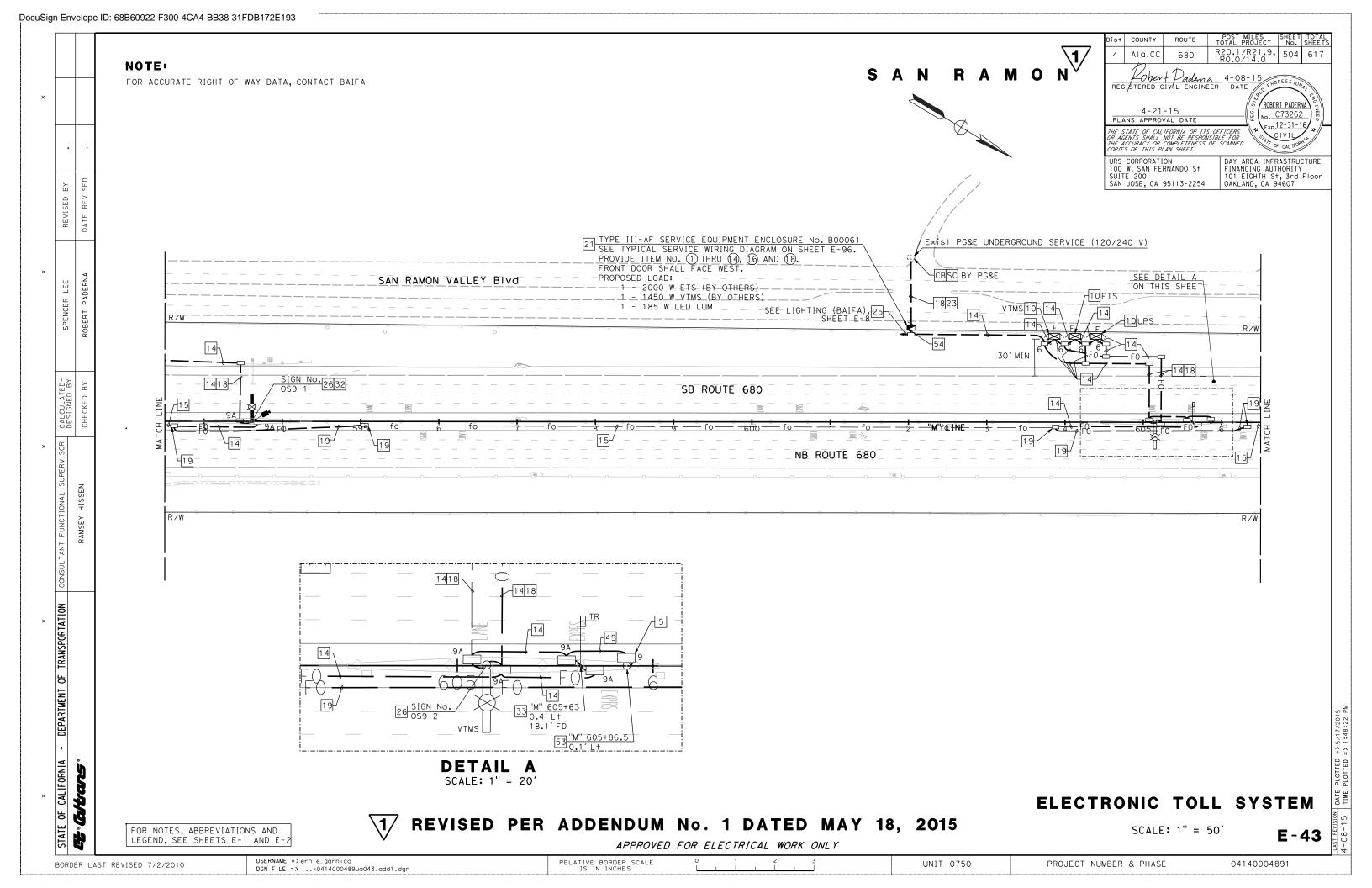


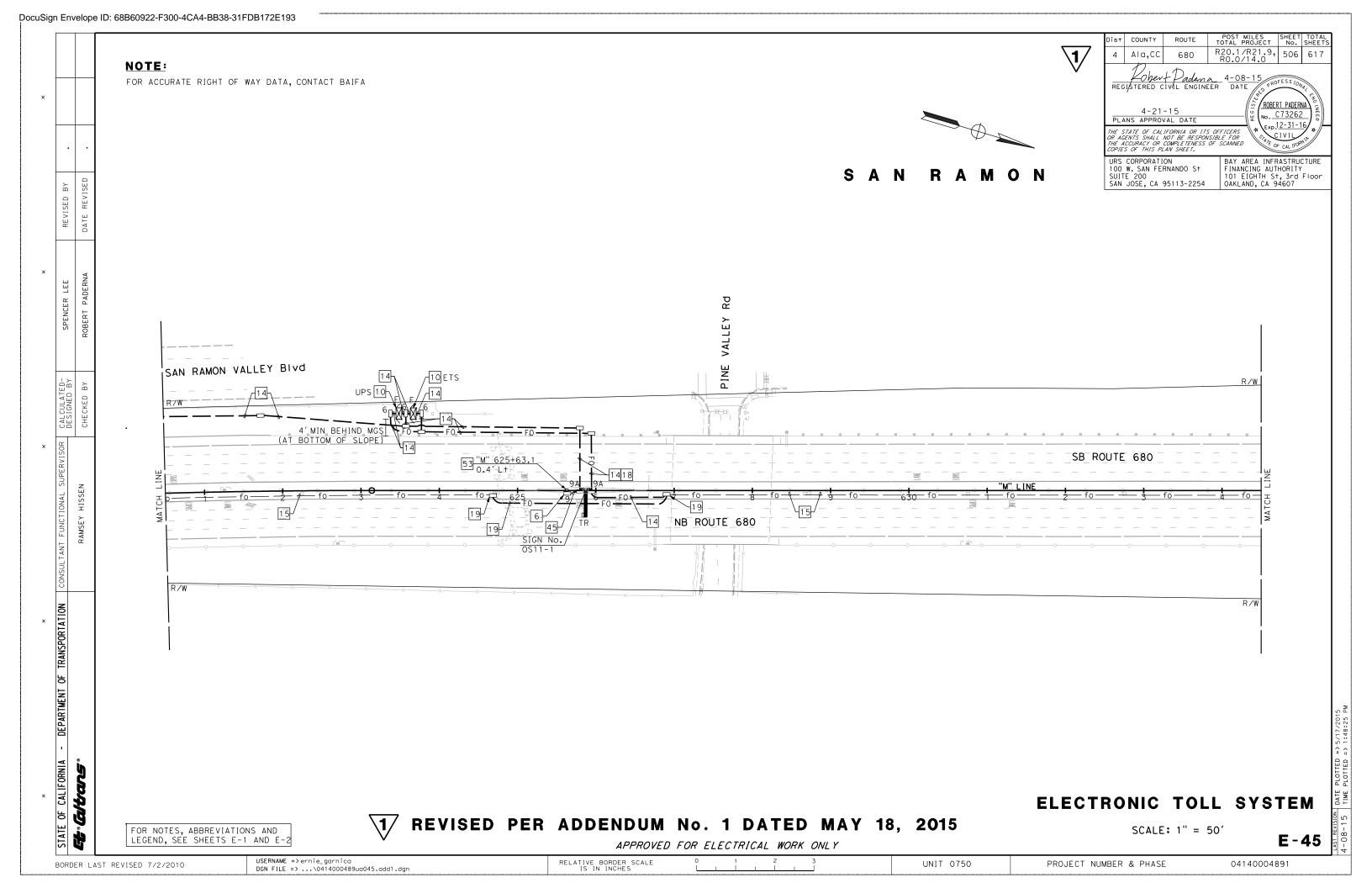


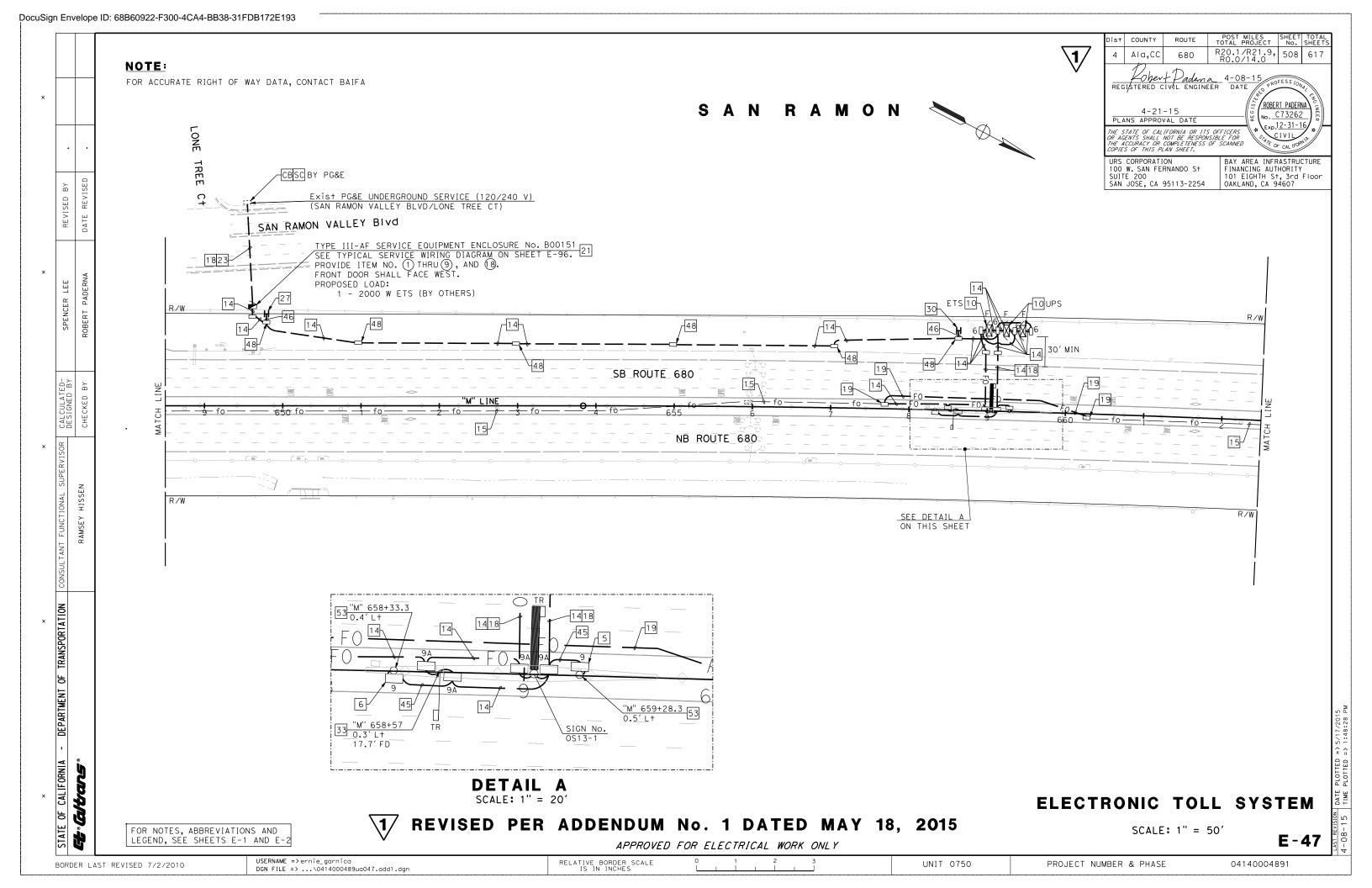


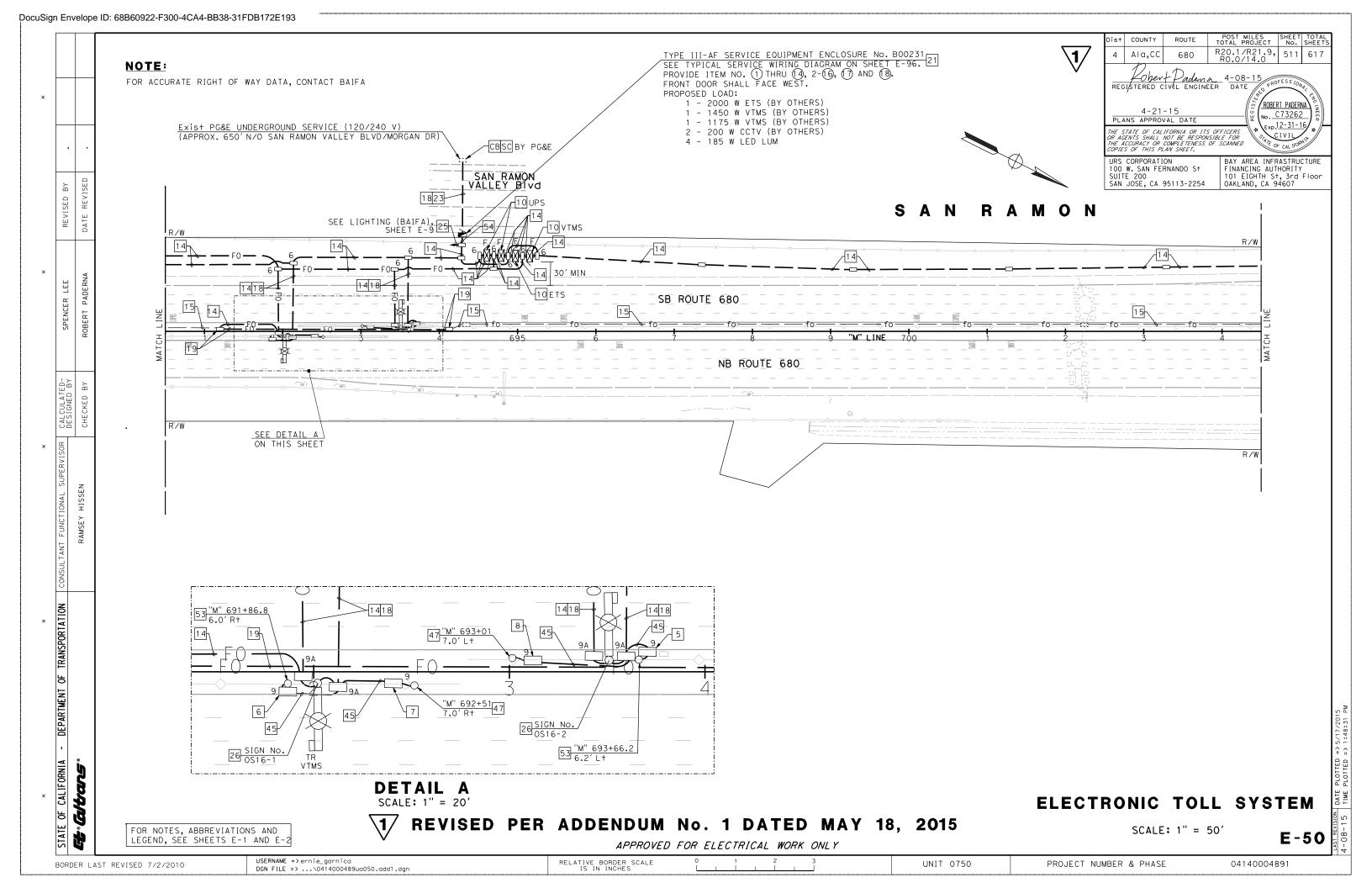


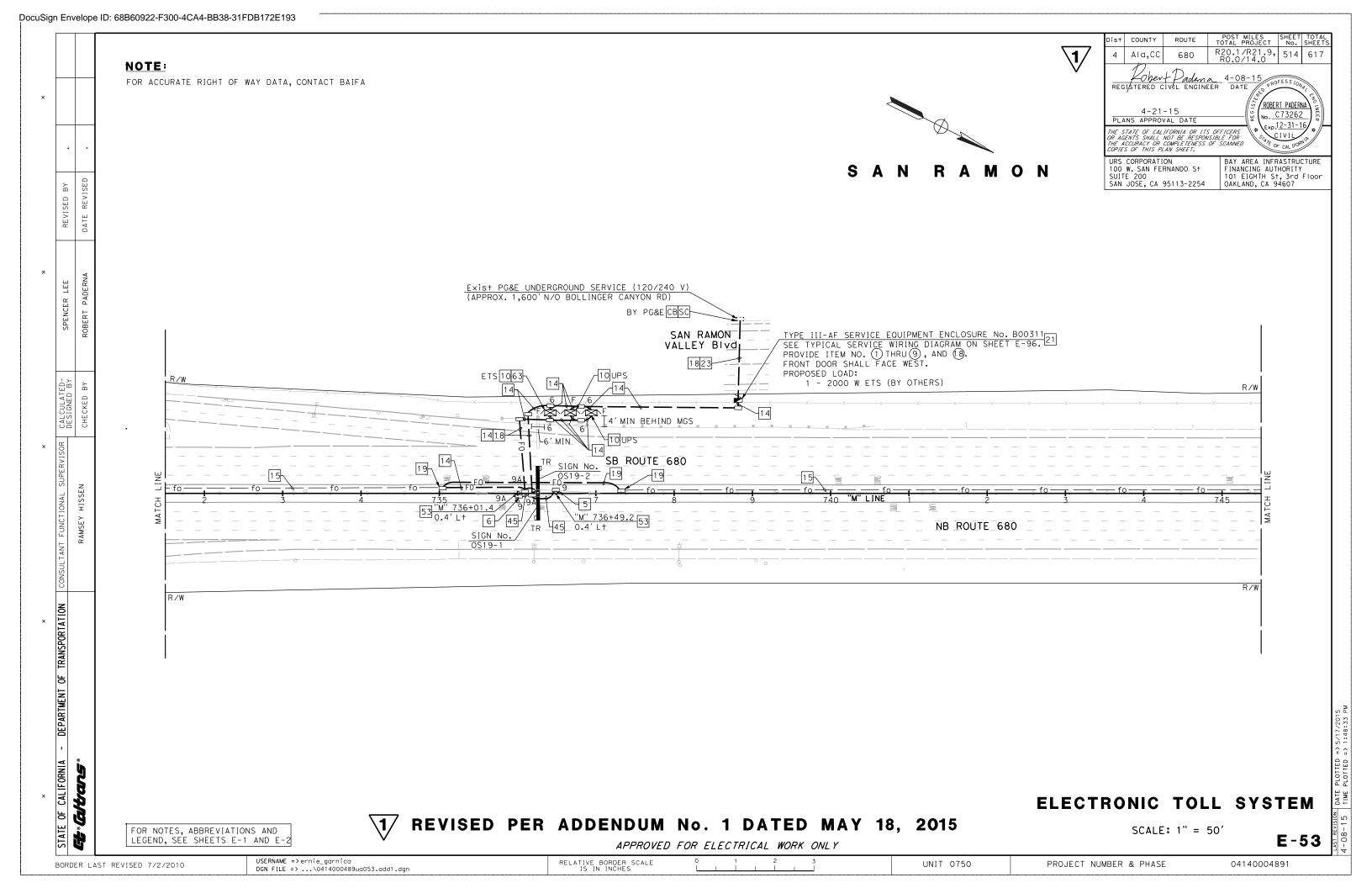


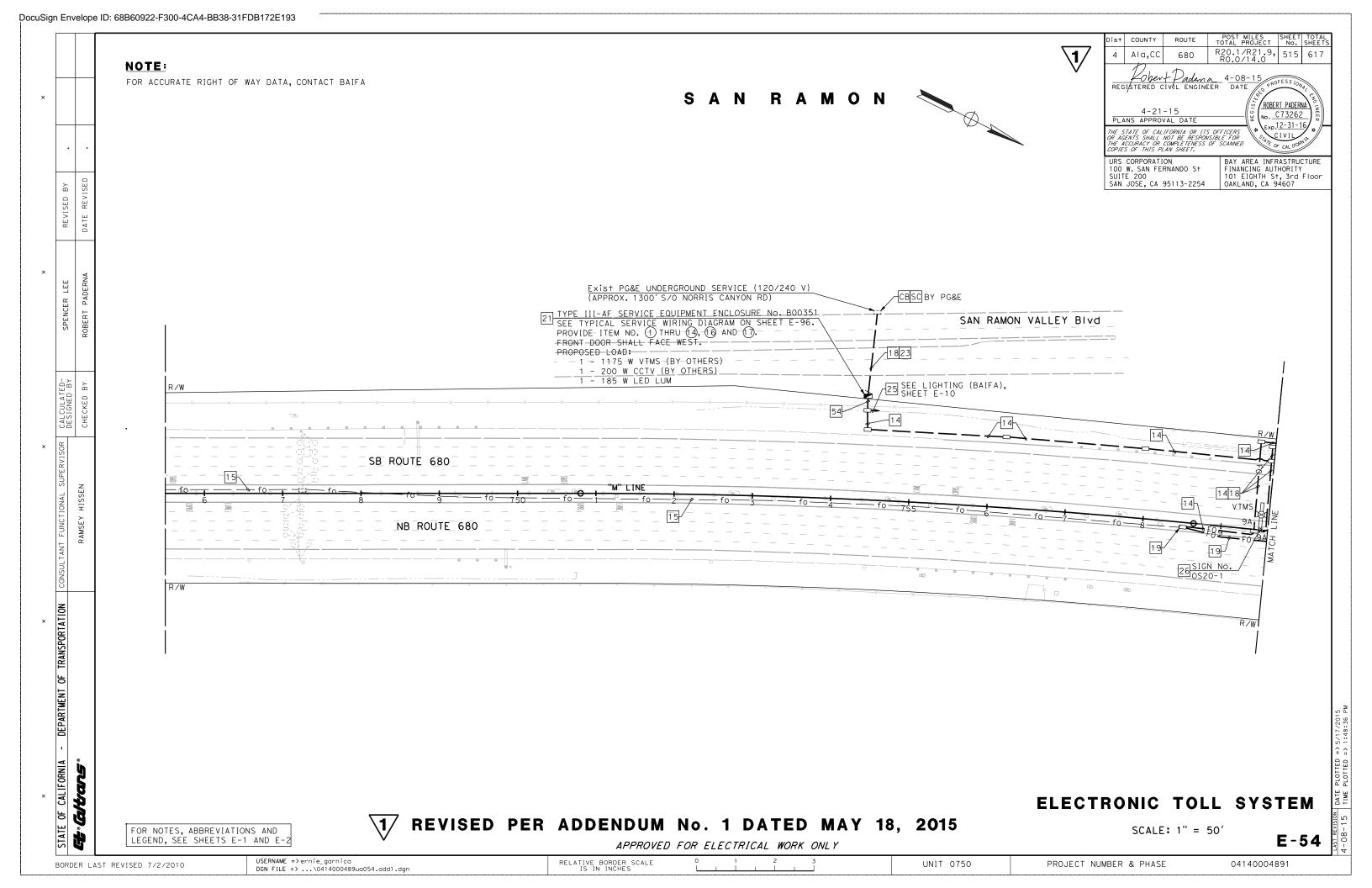


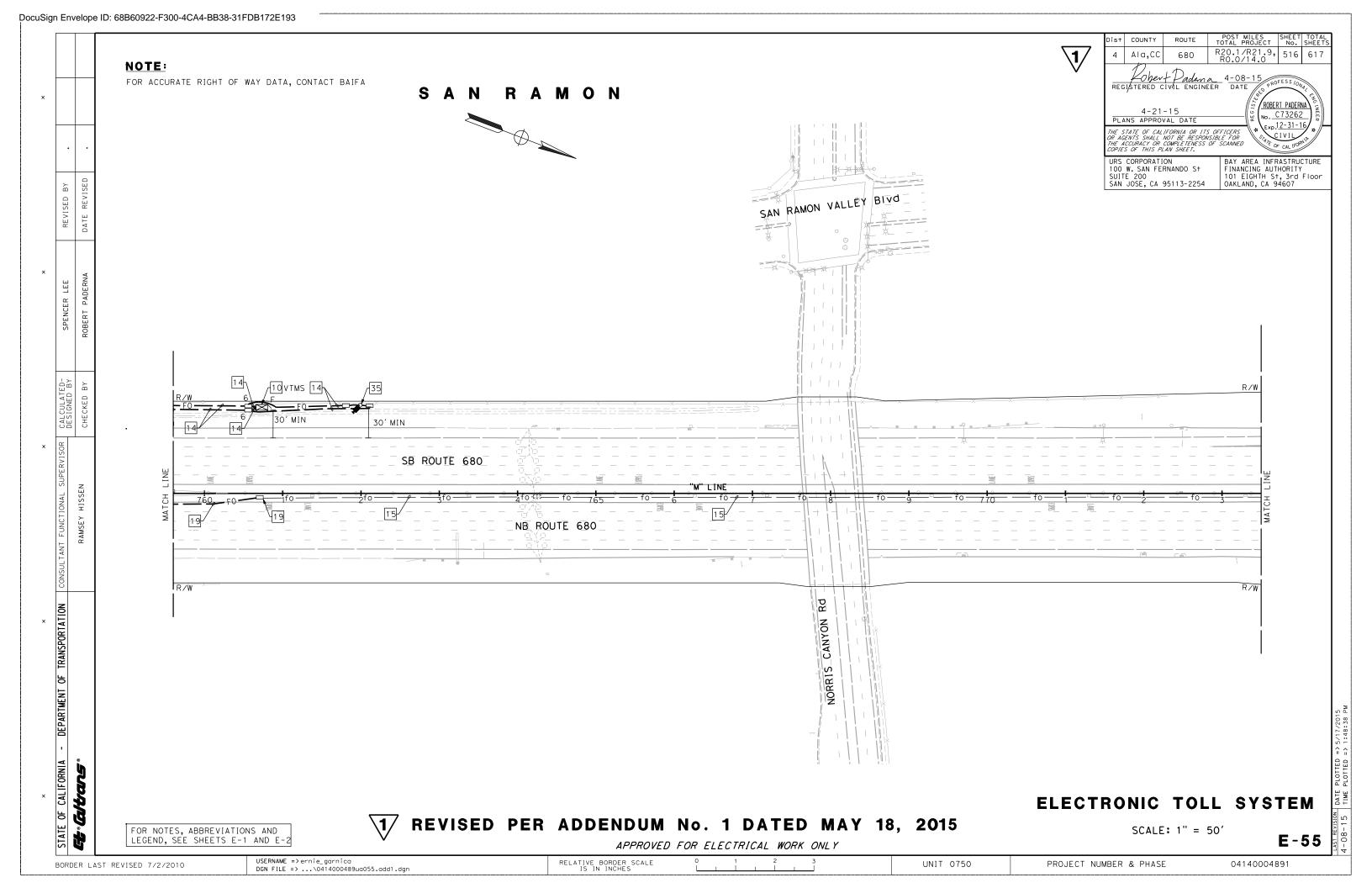


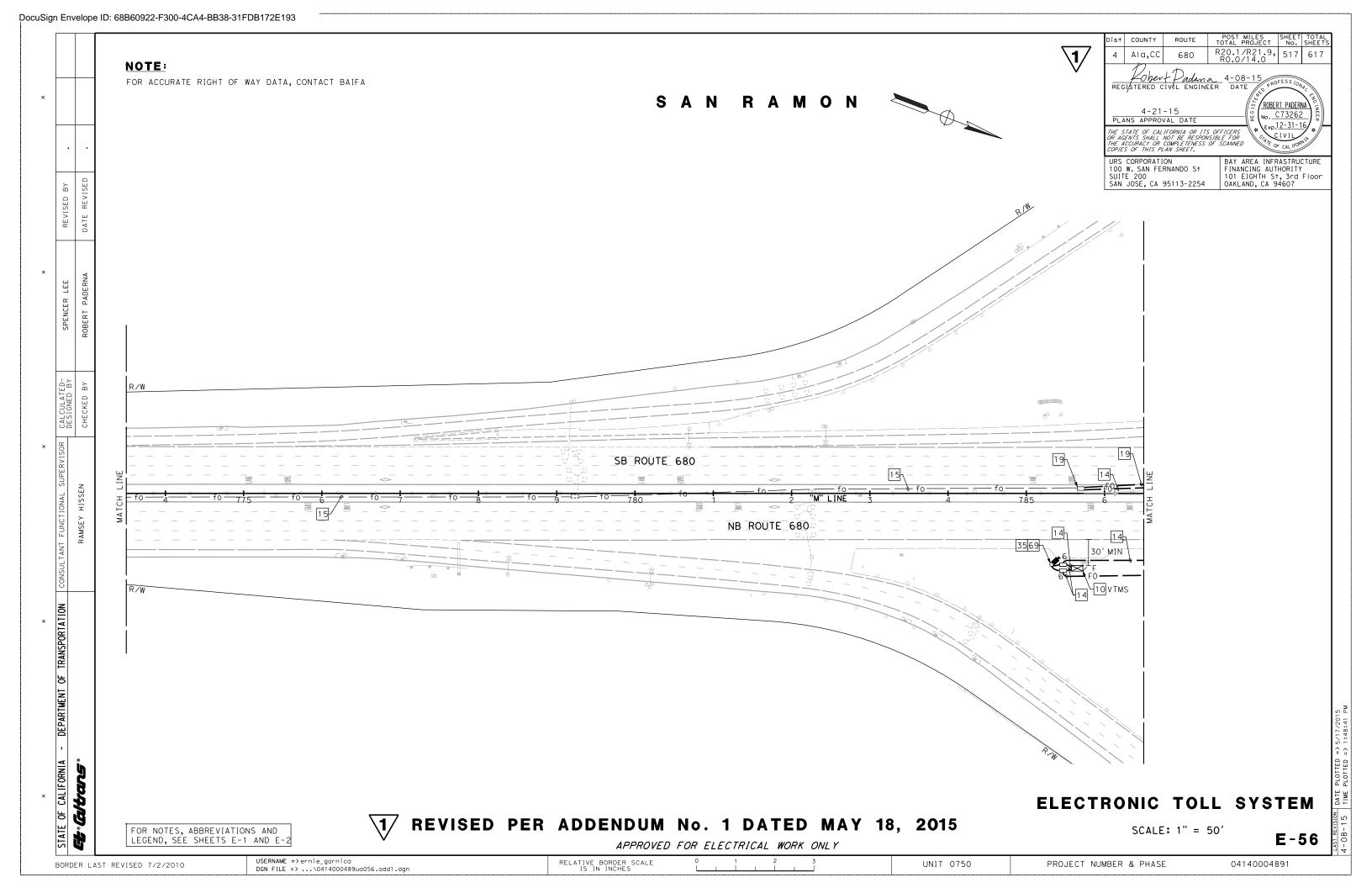


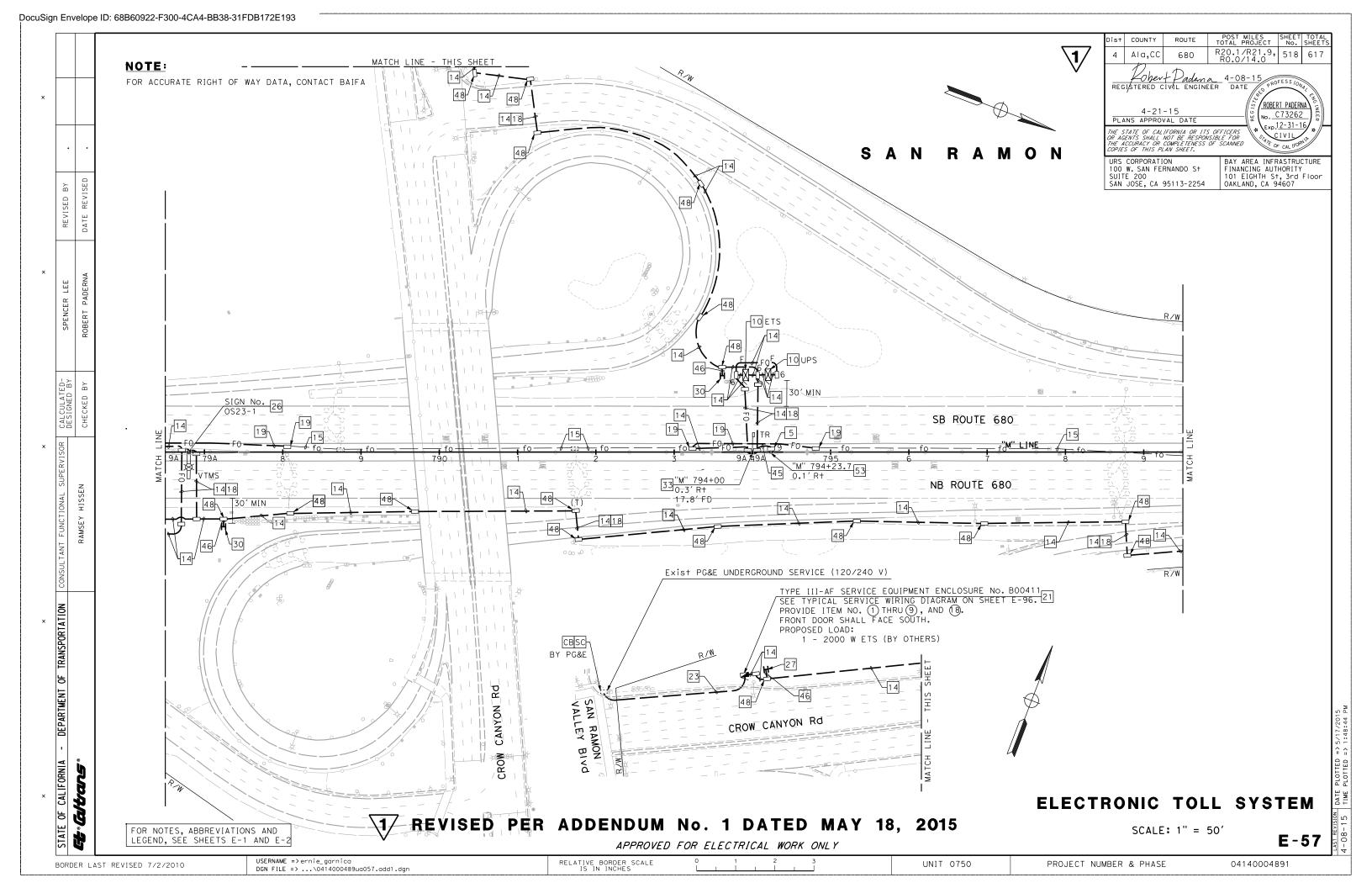


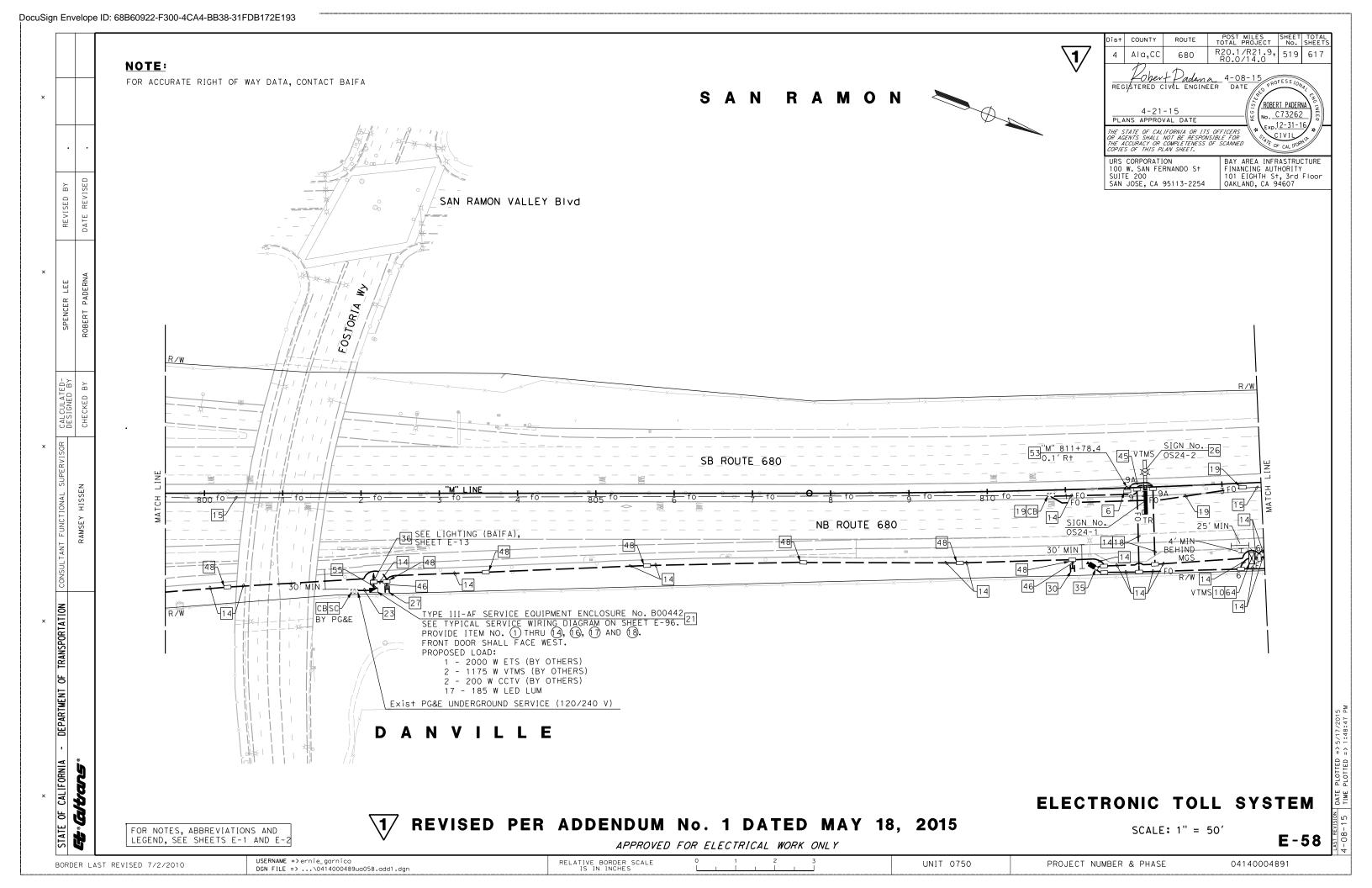


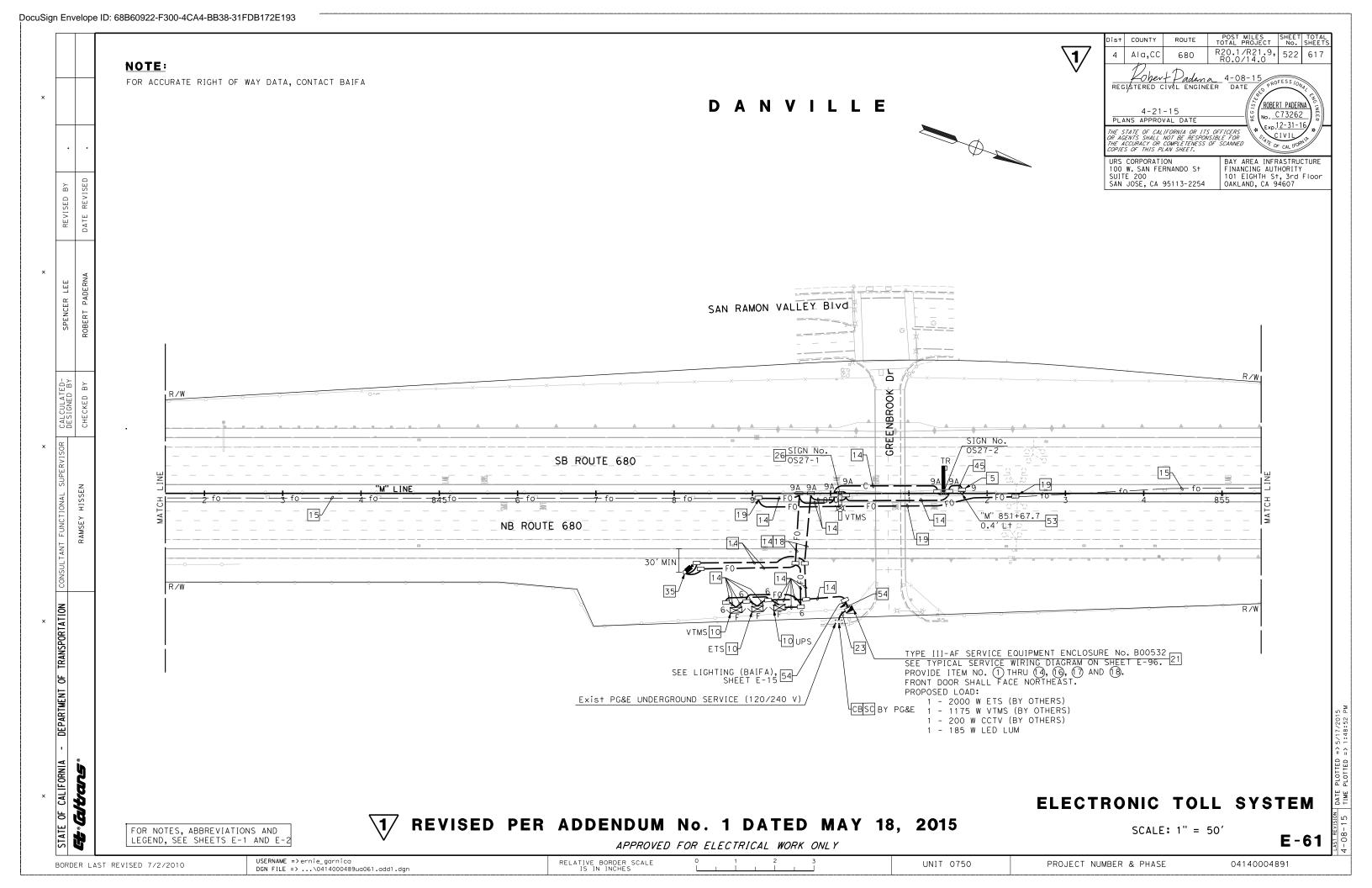


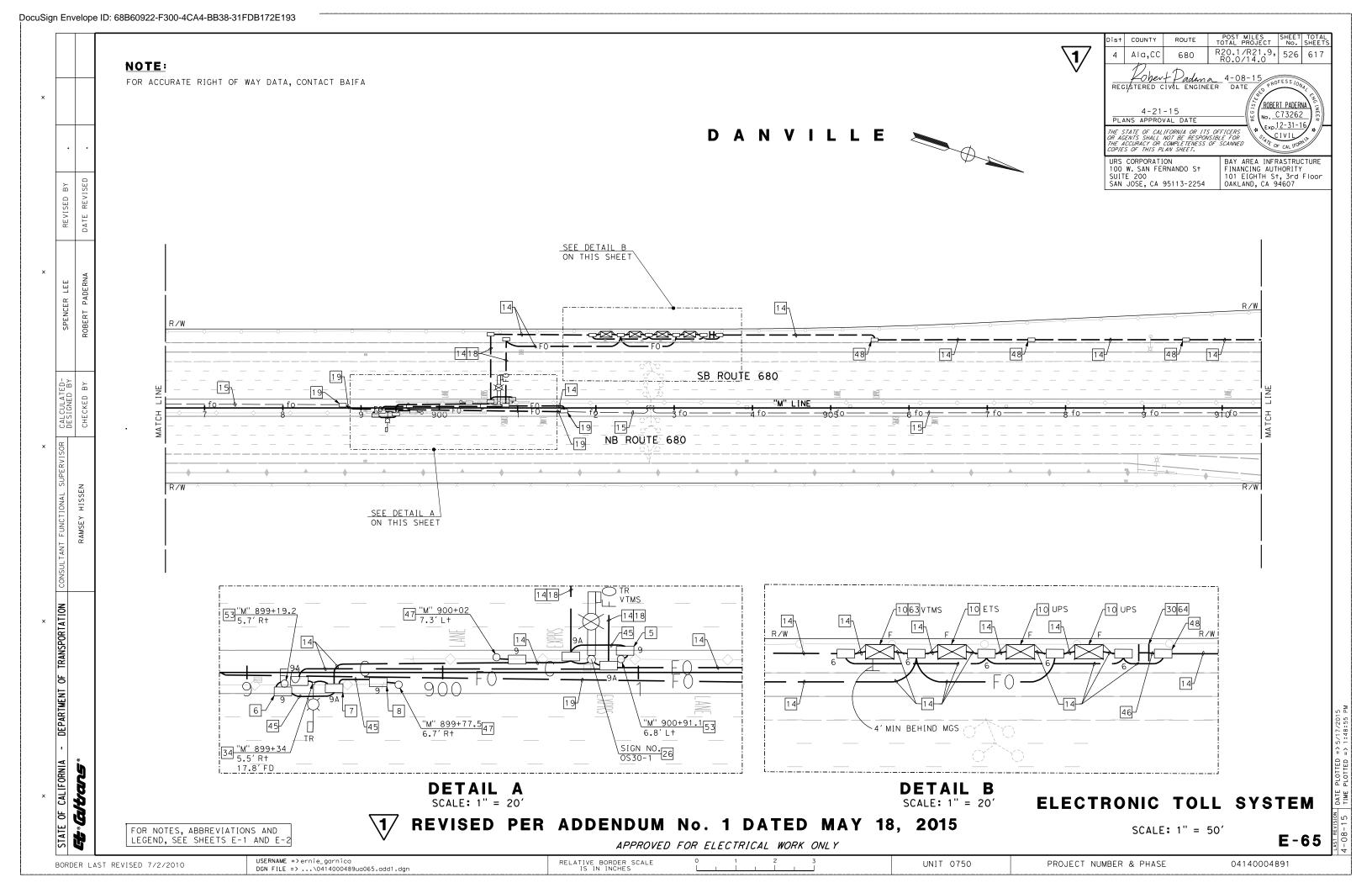


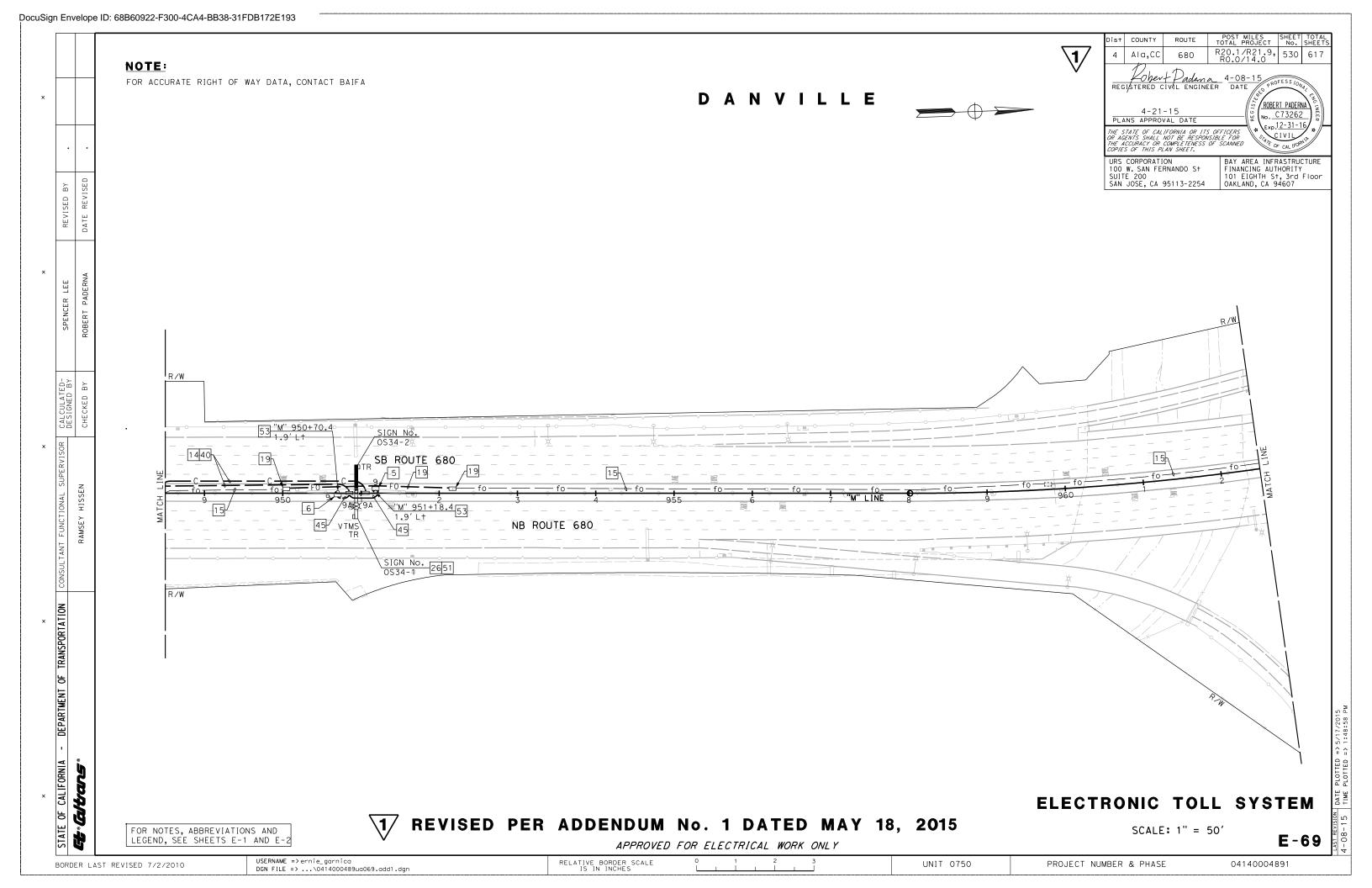


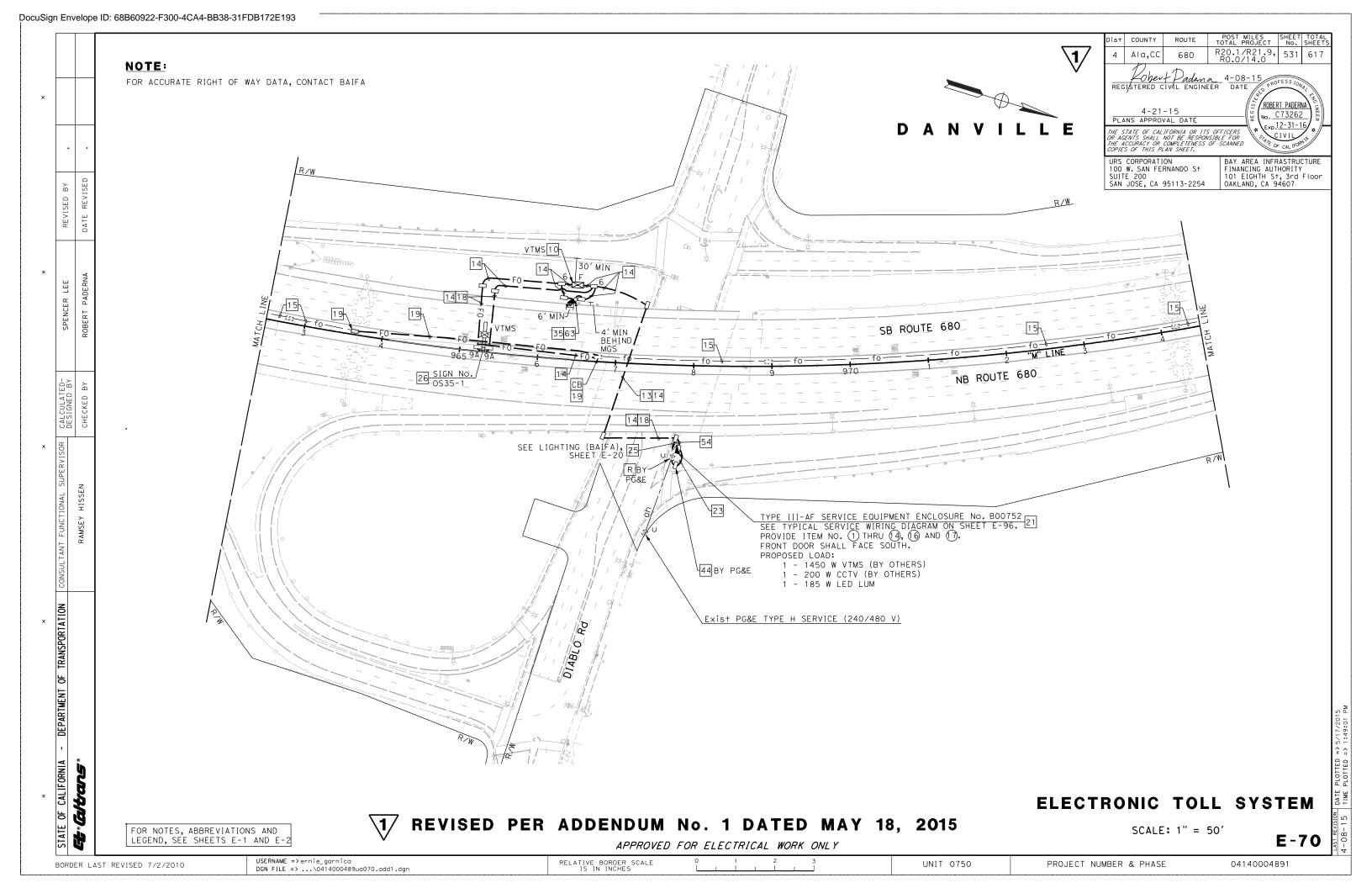


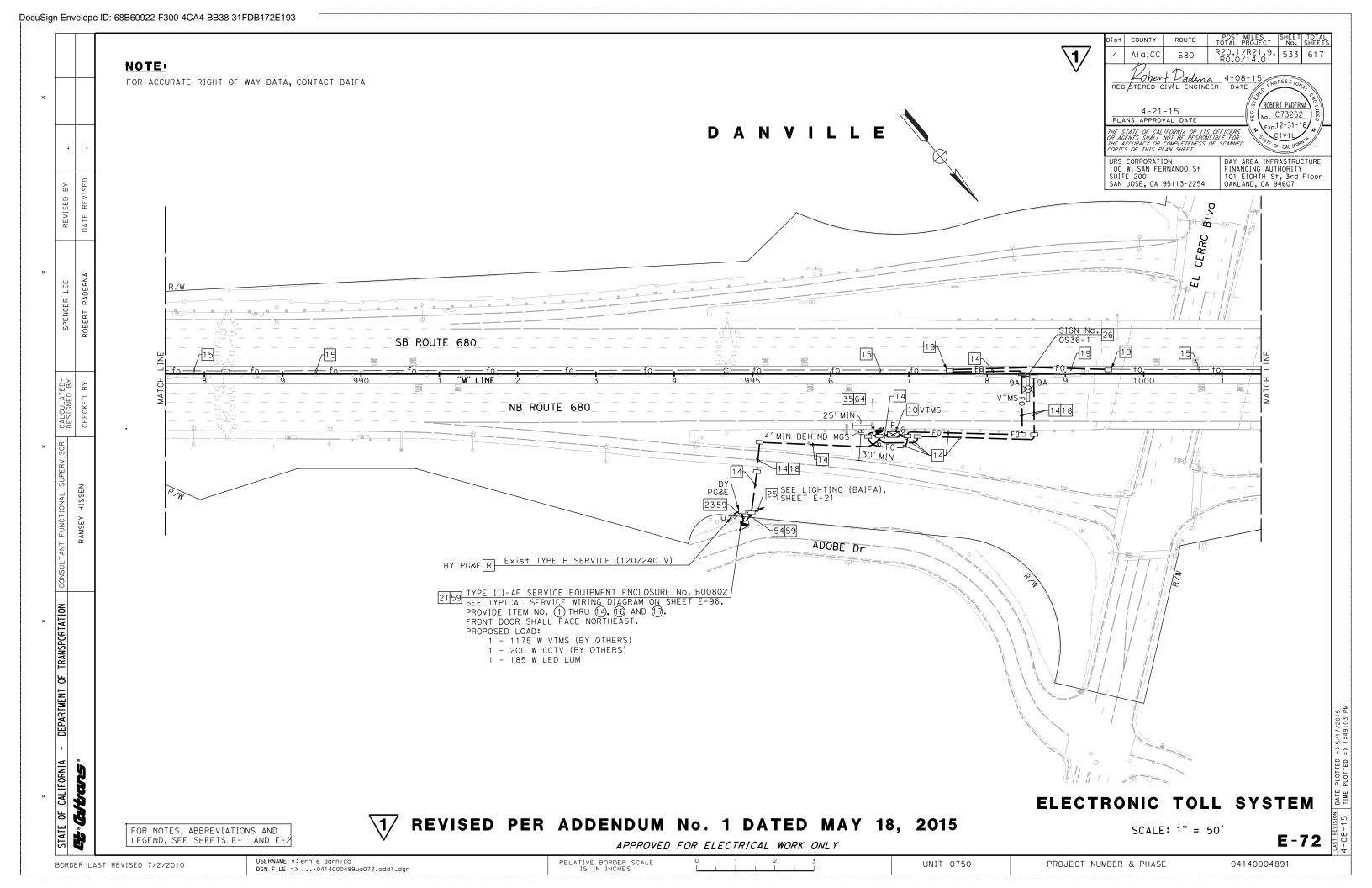


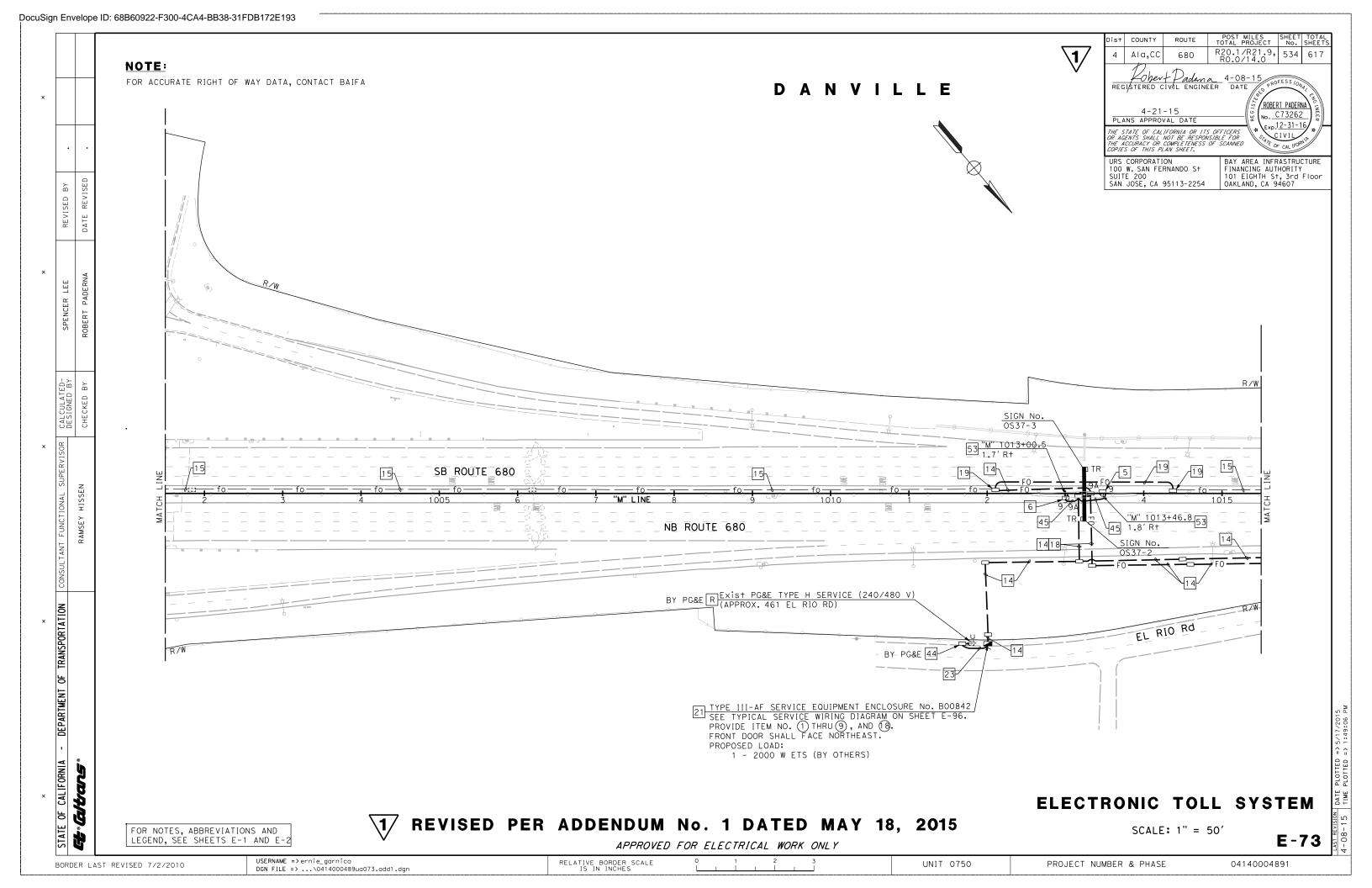


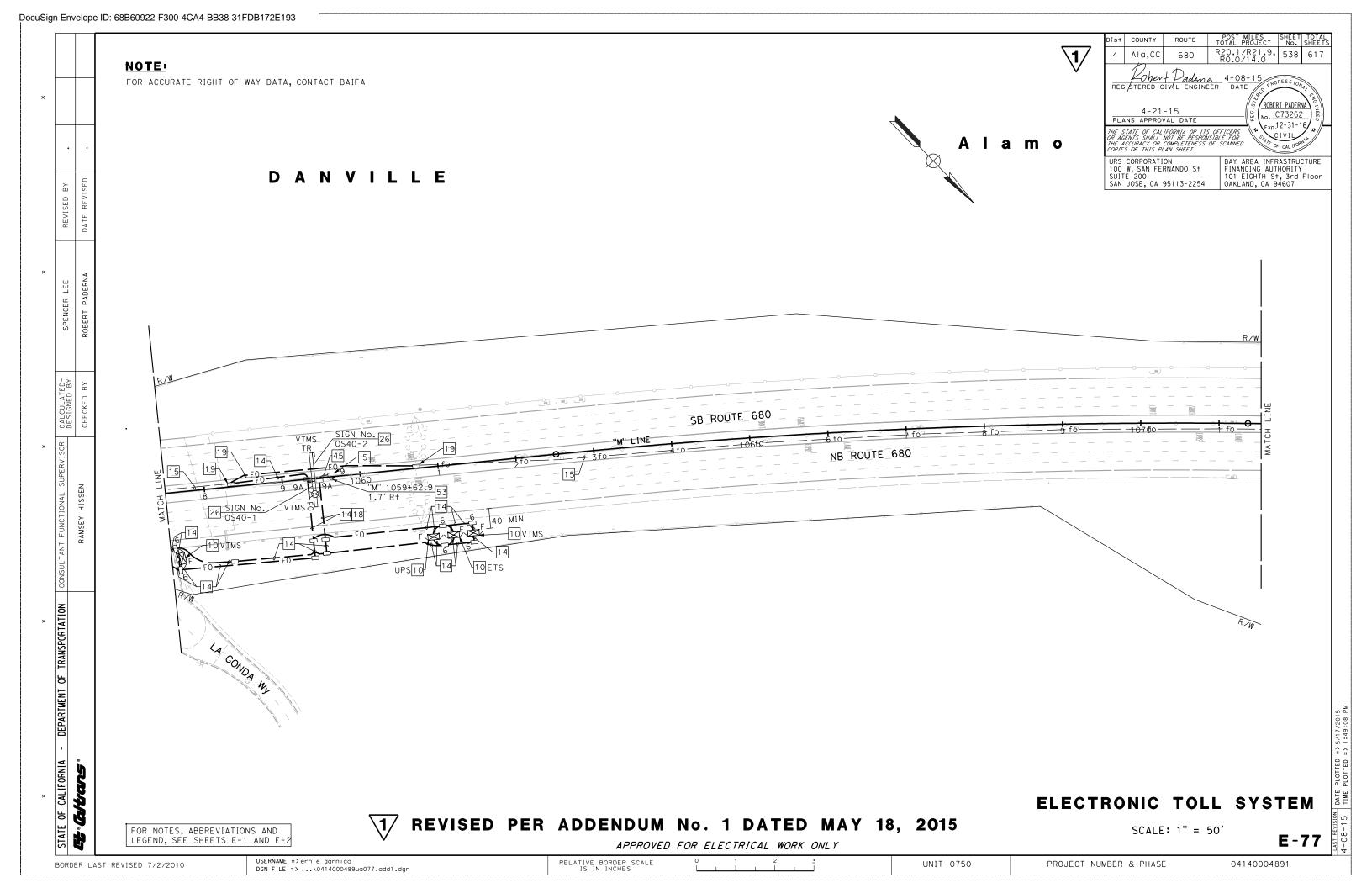


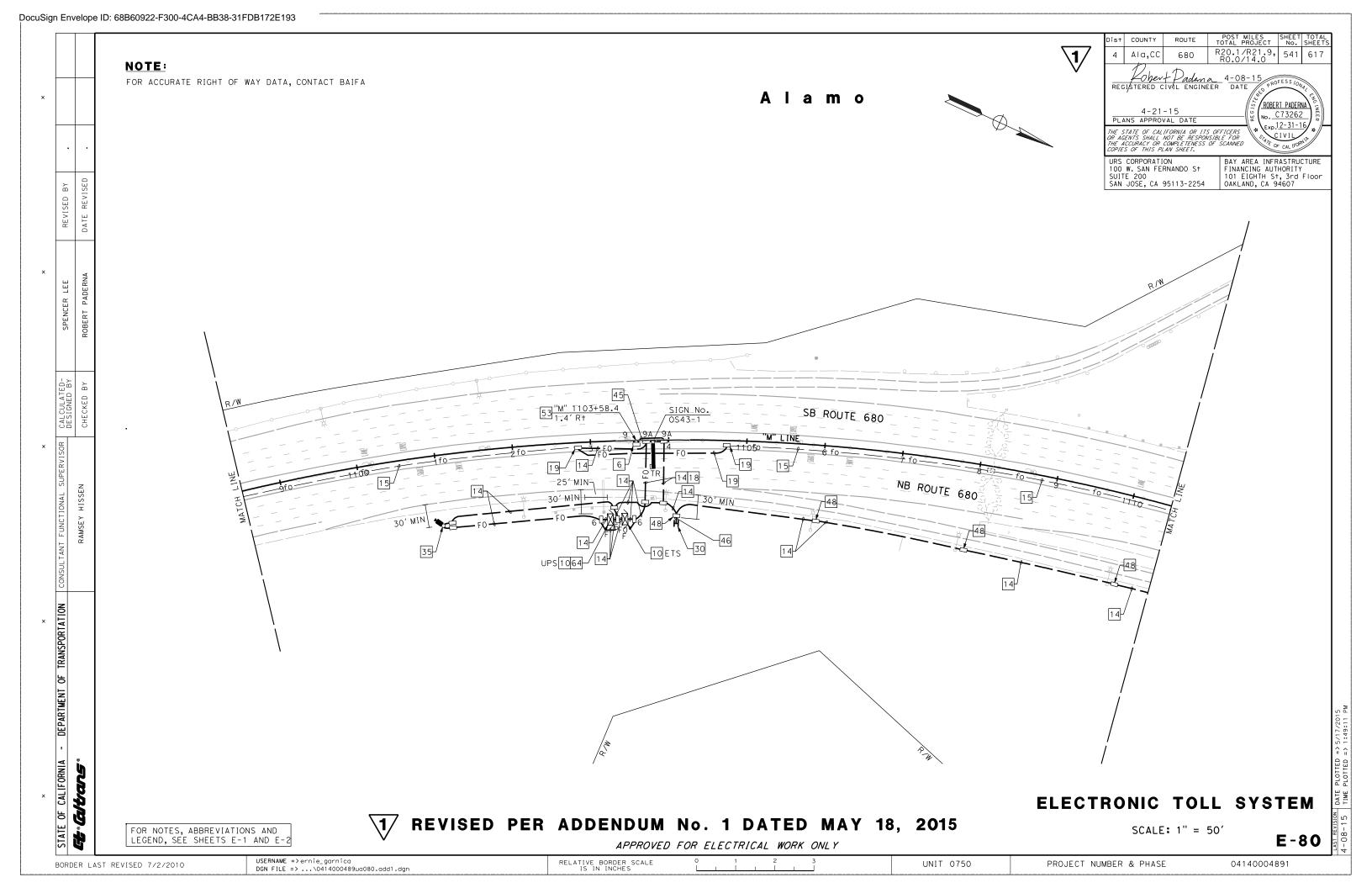


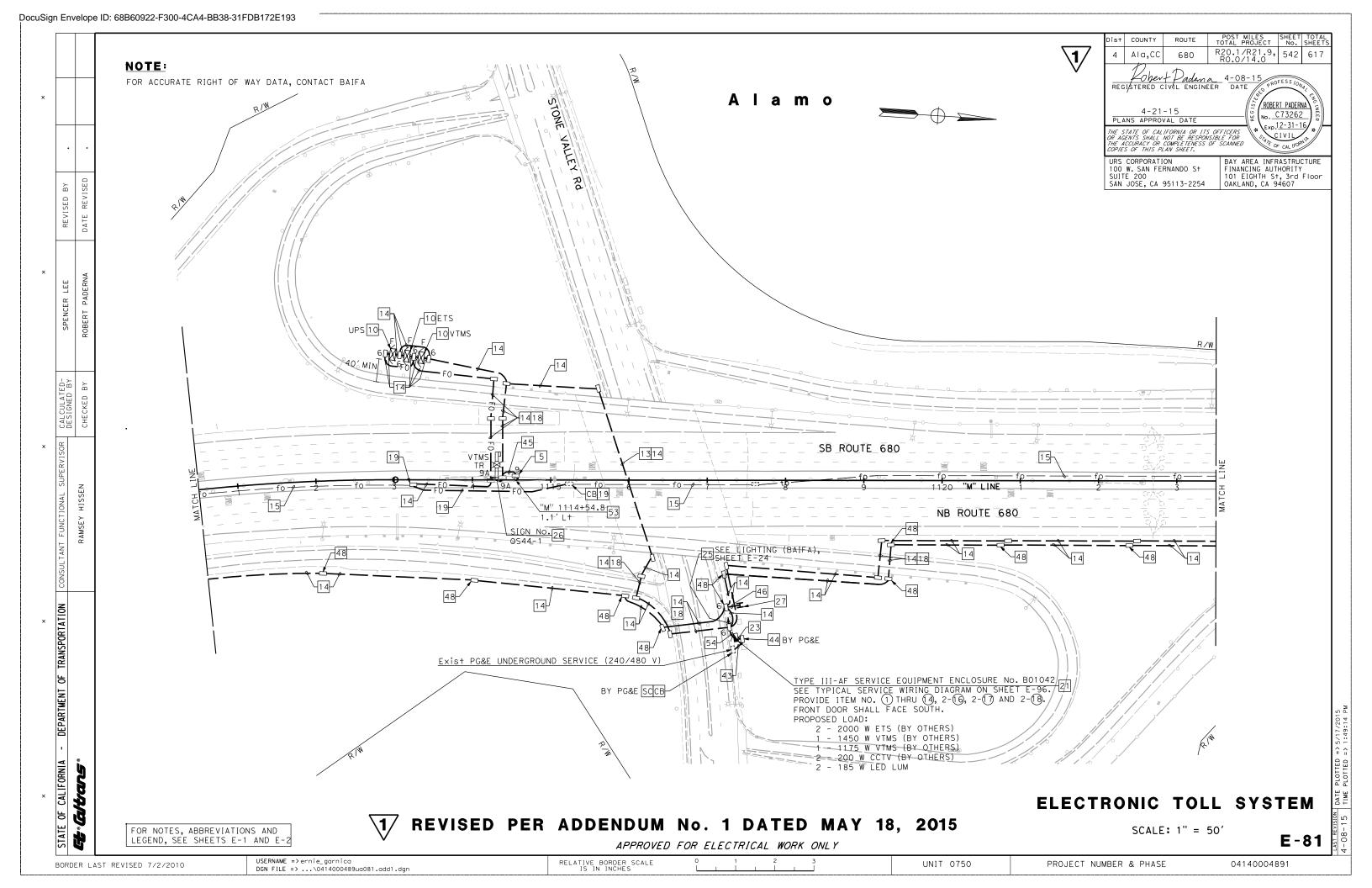


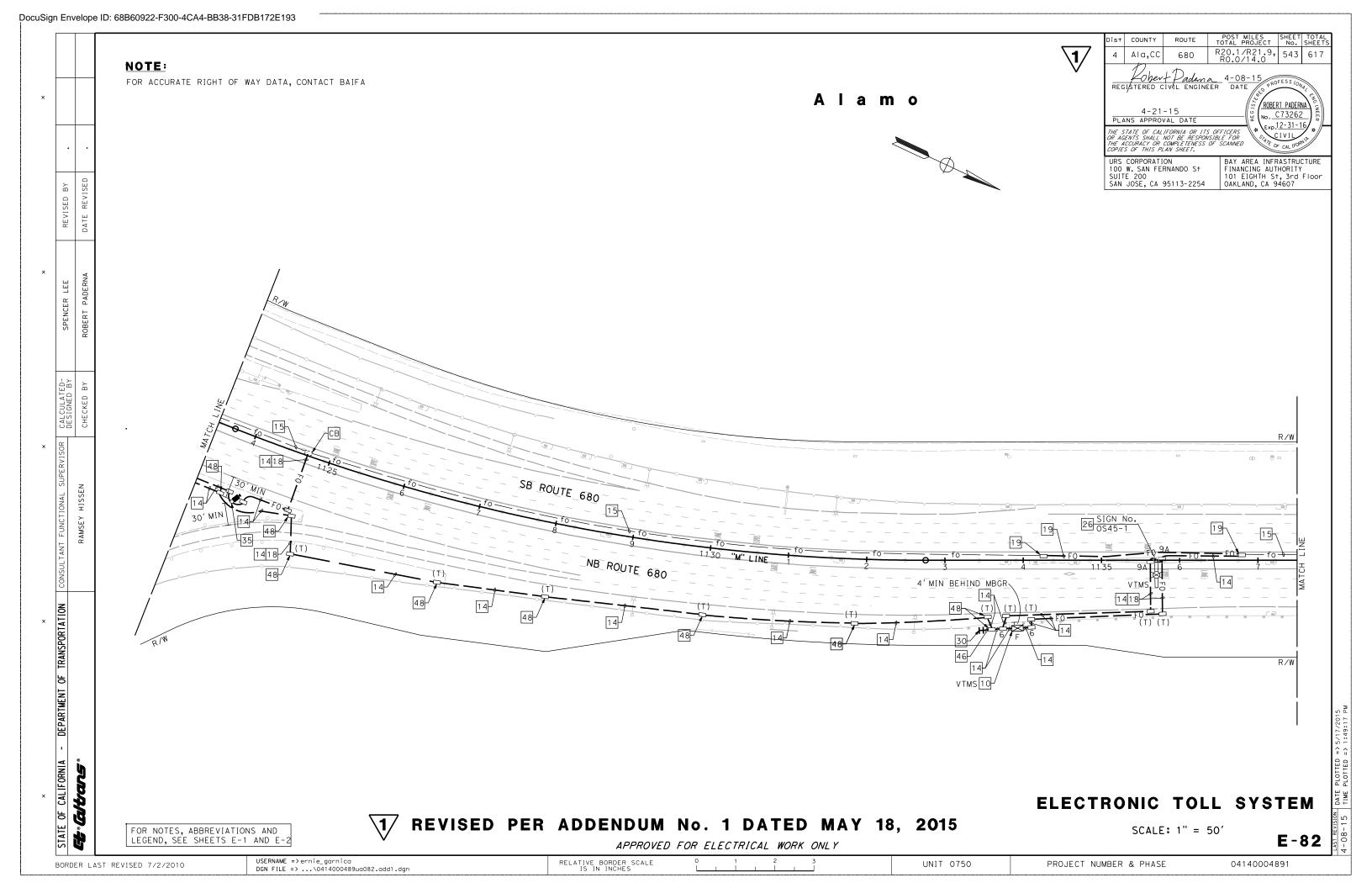


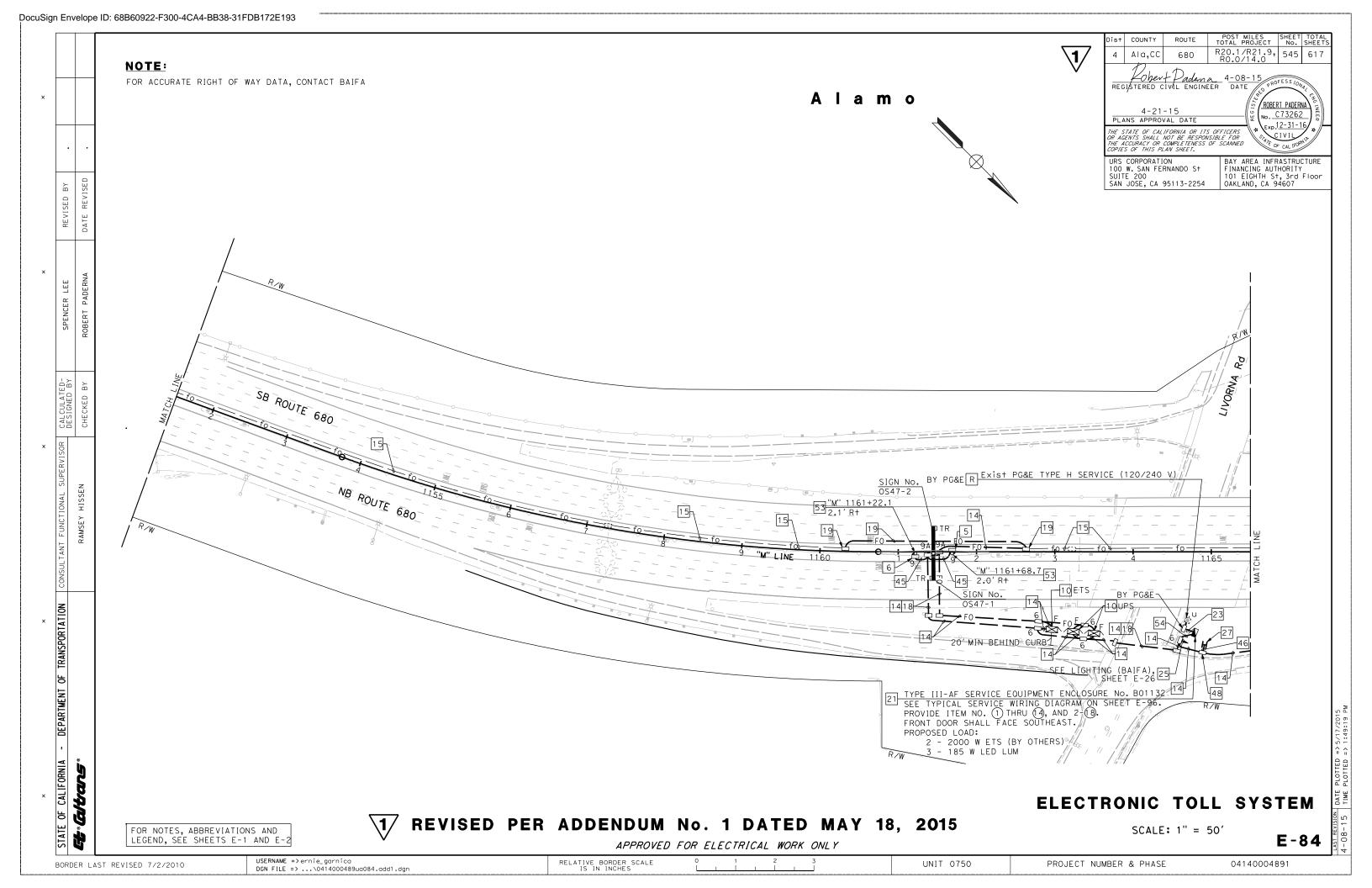


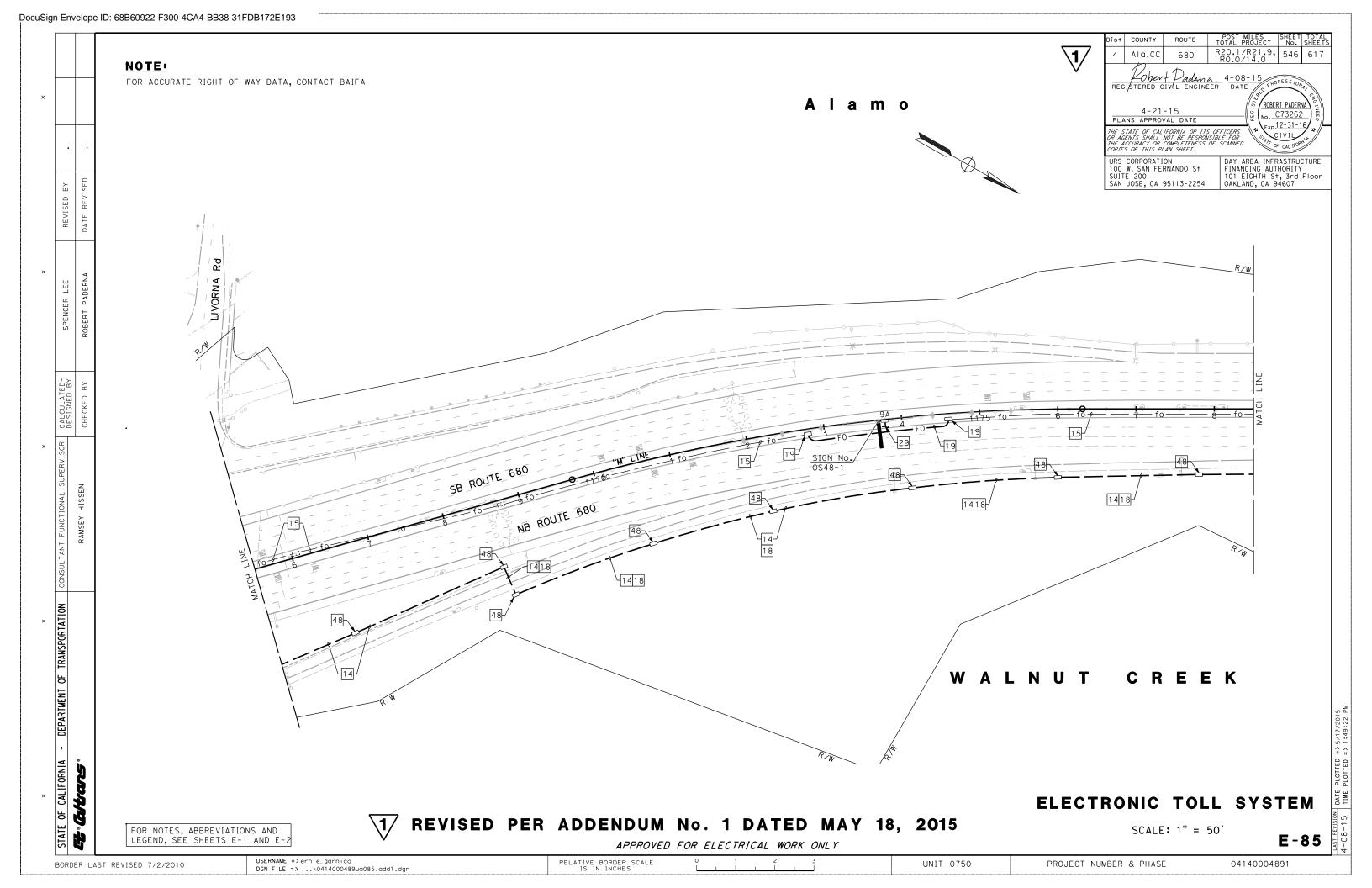


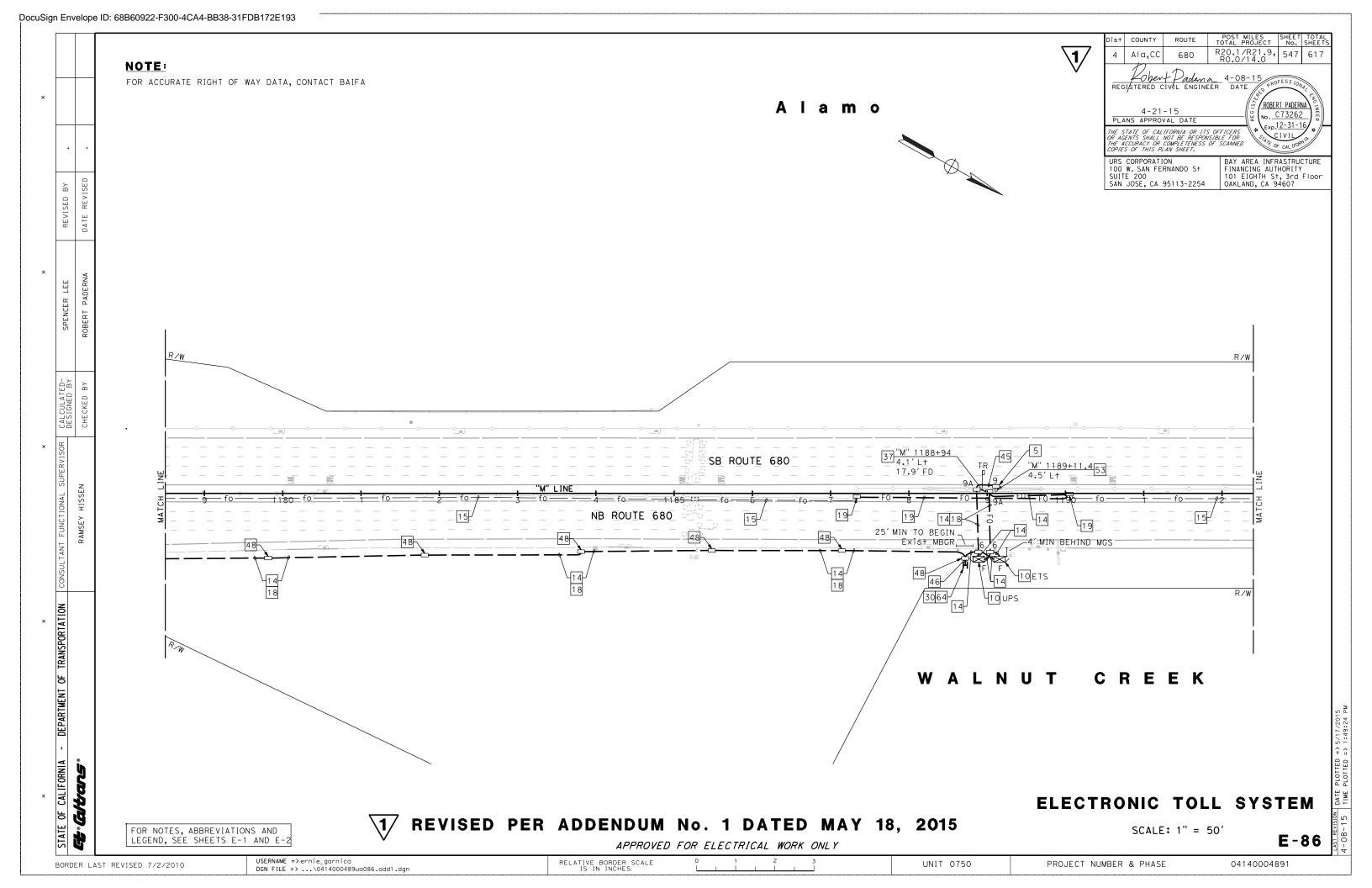


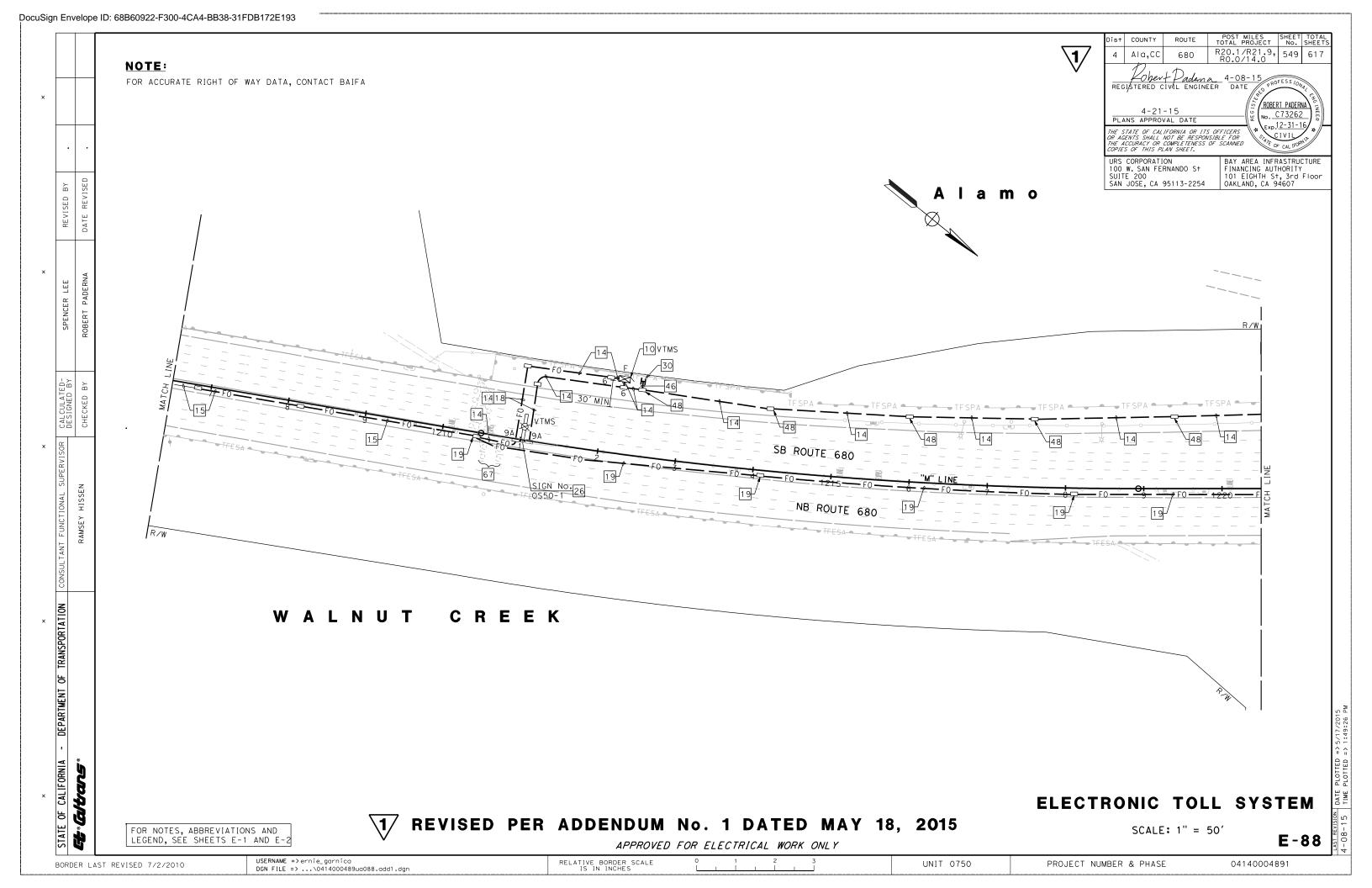


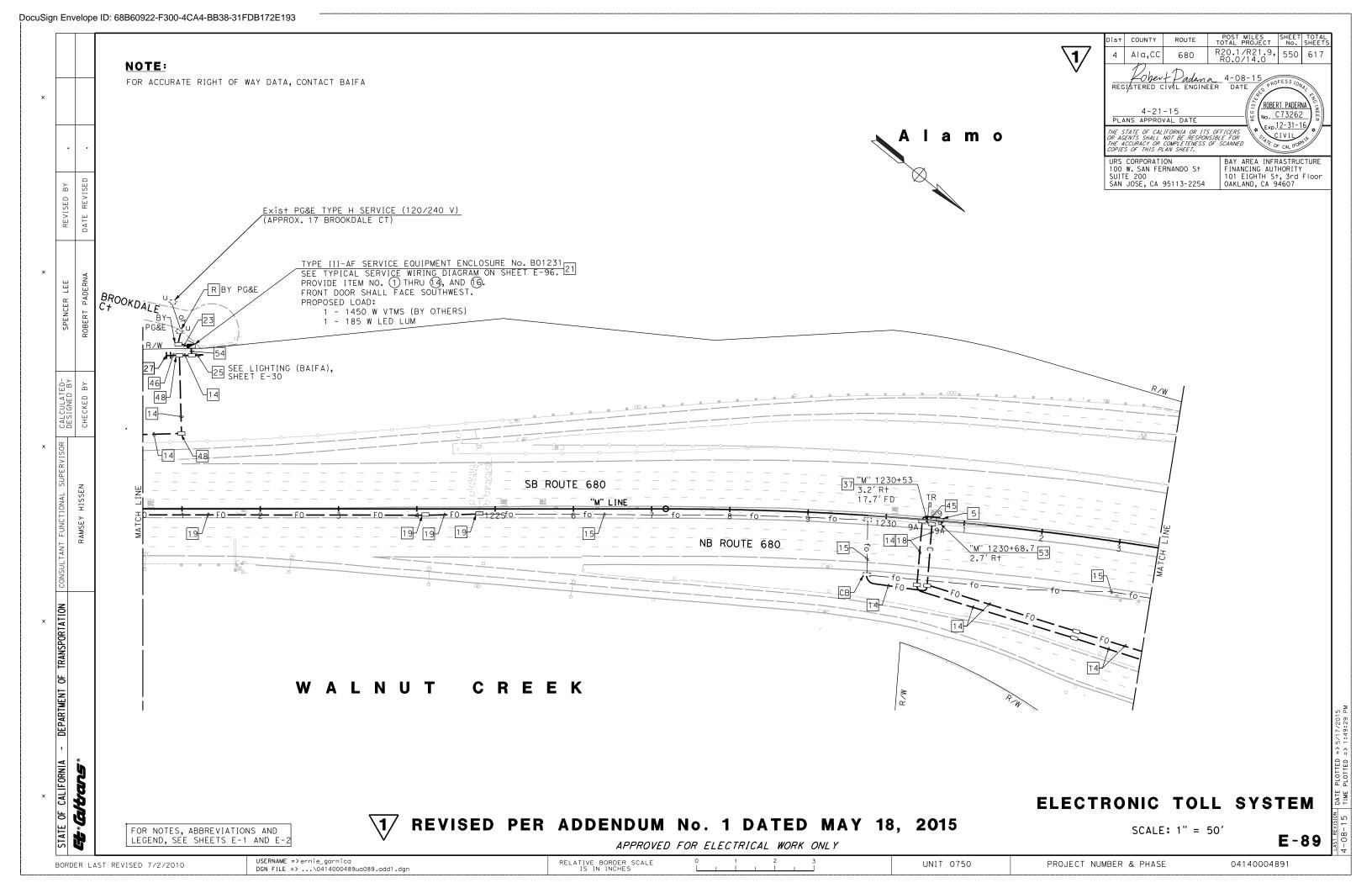












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POST MILES SHEET TOTAL TOTAL PROJECT No. SHEET Dist COUNTY R20.1/R21.9, 565 617 Ala,CC 680

Pohert Padena 4-08-15
REGISTERED CIVIL ENGINEER DATE 4-21-15

PLANS APPROVAL DATE THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

URS CORPORATION 100 W. SAN FERNANDO S+ SUITE 200 SAN JOSE, CA 95113-2254

BAY AREA INFRASTRUCTURE FINANCING AUTHORITY 101 EIGHTH St, 3rd Floor OAKLAND, CA 94607

ROBERT PADERNA

No. <u>C73262</u>

Exp.12-31-16

ELECTRONIC TOLL SYSTEM QUANTITIES

REVI	빝										ELE	CIRONIC	IULL SYS	IEM QUAN	IIIIE2								
- R	DATE			DUIT		PUL	LL BC			4" DIAMETEI SIGN POS		CONTROLLER CABINET		RAME			LE TYPE				DETECTOR LOOP	TYPE III-AF	CONDUCTORS
		SHEET No.		N]			[N]		1				STEP-UP TRANSFORMER	STEP-DOWN TRANSFORMER	60-5-100 20' SMA	60-5-100	61-5-100	CCTV 5	CCTV 35	CCTV 40	REPLACEMENT	SERVICE CABINET [N]	
	<		2" LF	3" LF	#5 EA			F6E #9		11'(VES) EA	7'(CHP) EA	PAD [N]	EA	EA	EA	EA	EA	EA	EA	EA	[N] EA	EA	#6 LF
LEE	PADERNA	E-34		930	3	LA		1	LA			1	LA	1			LA						860
	ADE	E-35					+ ' +		-			· ·	1	I				1				2	1400
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175	CHECKED	E-44		180	1		+-+		_													1	
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늘	۳	E-57	20	2,980	21	1	3	1	4			2	1	2		1						1	
ΙΨ		E-58	40	1,920	12		2	1	2	1		1	1	1					1			1	
131		E-59		60			2					2											
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_		E-62					+																
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ΔI		E-64																					
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18		E-66		820	9								1						1			1	
NA N		E-67																					
12		E-68		2,150	12		5	4				4								1	4	1	
ايدا		E-69	40	500				2	2														
2		E-70		980	7		2		2			1							1			1	
E		E-71																					
		E-72		930	7		2		2			1							1			1	
AR		E-73	60	1,000	6				2													1	
DEPARTMENT OF TRANSPORTATION		SUB-TOTAL	540	29,630	157	6	58	1 26	53	18	4	40	5	6	0	4	1	1	9	1	4	18	2,260

[N] - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

CAL IFORNIA

SEE SHEET EE-22 FOR BACKHAUL COMMUNICATIONS QUANTITIES.

1/ REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

ELECTRICAL QUANTITIES (ELECTRONIC TOLL SYSTEM)

NO SCALE

E-104

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DGN FILE => ...\0414000489ua104.add1.dgn RELATIVE BORDER SCALE
IS IN INCHES UNIT 0750 PROJECT NUMBER & PHASE 04140004891 BORDER LAST REVISED 7/2/2010

REVISED BY

SPENCER LEE

DEPARTMENT OF TRANSPORTATION

CALIFORNIA

뇽

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R20.1/R21.9, 566 617 Ala,CC 680

REGISTERED CIVIL ENGINEER DATE 4-21-15

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

URS CORPORATION 100 W. SAN FERNANDO S+ SUITE 200 SAN JOSE, CA 95113-2254 BAY AREA INFRASTRUCTURE FINANCING AUTHORITY 101 EIGHTH St, 3rd Floor OAKLAND, CA 94607

ROBERT PADERNA

No. <u>C73262</u>

Exp.12-31-16

PLANS APPROVAL DATE

ELECTRONIC TOLL SYSTEM QUANTITIES

	CONDUIT								4" DIAMETER NPS XS		1 CADINET -				POL	E TYPE [[N]			DETECTOR LOOP	SERVICE	CONDUCTORS
SHEET No.	1]			\	[N]				SIGN PO		CABINET FOUNDATION	STEP-UP TRANSFORMER	STEP-DOWN TRANSFORMER	60-5-100 20' SMA	60-5-100 25' SMA	61-5-100 20' SMA	CCTV	CCTV 35	CCTV 40	REPLACEMENT	SERVICE CABINET [N]	
	2"			‡5(T)						7'(CHP)	PAD [N]						J			[N]		#6
	LF	LF	EΑ	EΑ	EA	EΑ	EΑ	EA	EΑ	EA	EΑ	EΑ	EΑ	EA	EA	EA	EΑ	EΑ	EΑ	EA	EΑ	LF
E-74		540	2		4						3											
E-75																						
E-76		680	7															1			1	
E-77	20	1,100	5		6		1	2	1		4											
E-78																						
E-79																						
E-80	40	1,430	9		3		1	2	1		2		1					1				
E-81	20	3,420	23		6		1	2	1		3	1									1	
E-82		1,840	6	10	2			2			1		1					1				
E-83																						
E-84	60	940	5		5		2	2	2		3	1									1	
E-85		1,320	8					1														
E-86	30	1,310	6		2		1	2	1		2		1	1								
E-87																						
E-88		1,300	7		2			2			1		1									
E-89	20	1,010	7				1		1			1		1							1	
E-90		1,180	6		2			2			2										2	
E-91																						
E-92																						
E-93		710		2	3			2			2										1	
E-94		200	2					2														
E-95		380	4	1														1			1	
SUB-TOTAL	190	17,360	102	13	35	0	7	23	7	0	23	3	4	2	0	0	0	4	0	0	8	
GRAND TOTAL	730	46,990	259	19	93	1	33	76	25	4	63	8	10	2	4	1	1	13	1	8	26	2,260

[N] - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

SEE SHEET EE-22 FOR BACKHAUL COMMUNICATIONS QUANTITIES.

REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

ELECTRICAL QUANTITIES (ELECTRONIC TOLL SYSTEM)

NO SCALE

E-105

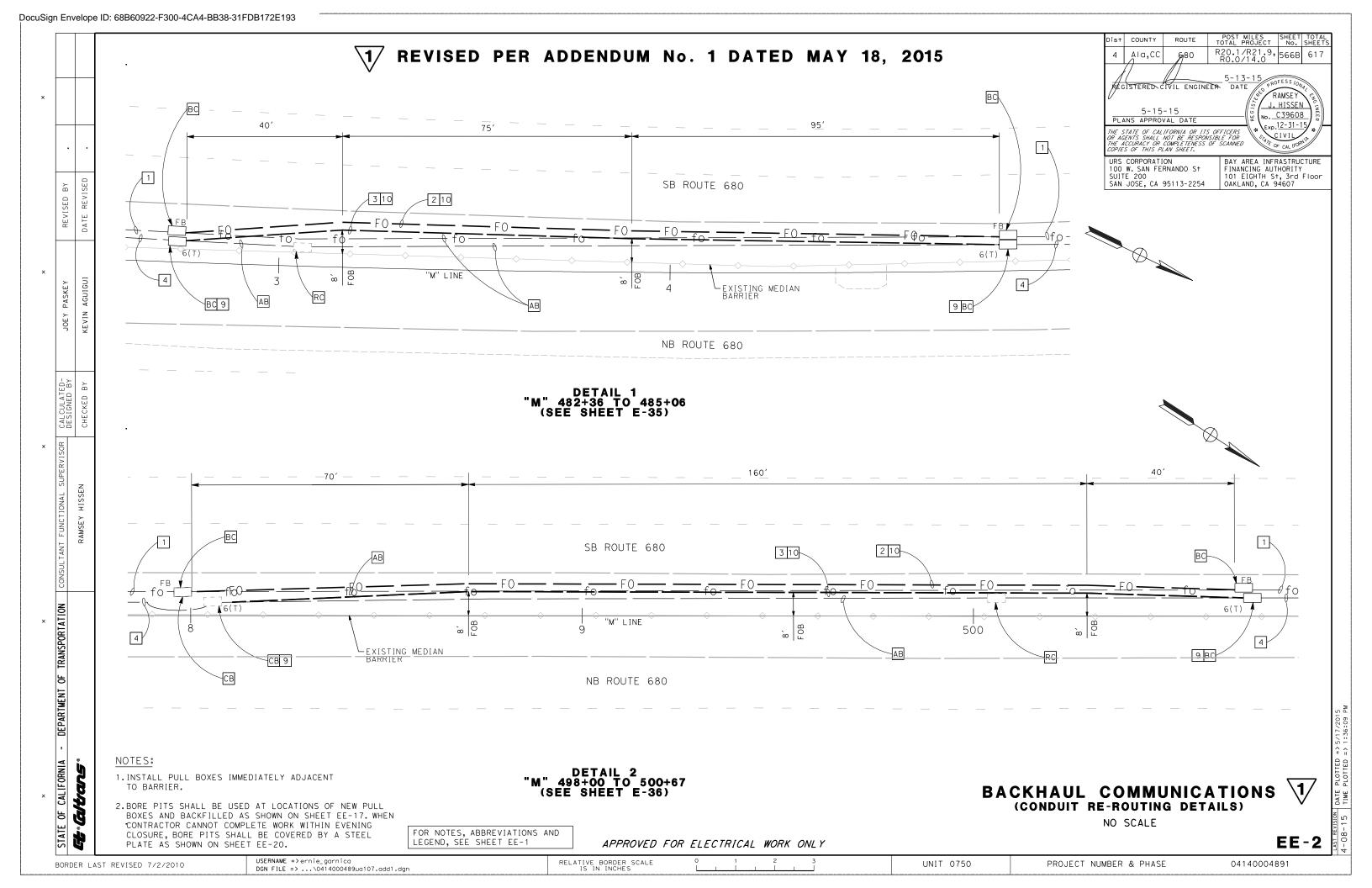
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IS IN INCHES UNIT 0750 PROJECT NUMBER & PHASE 04140004891 BORDER LAST REVISED 7/2/2010

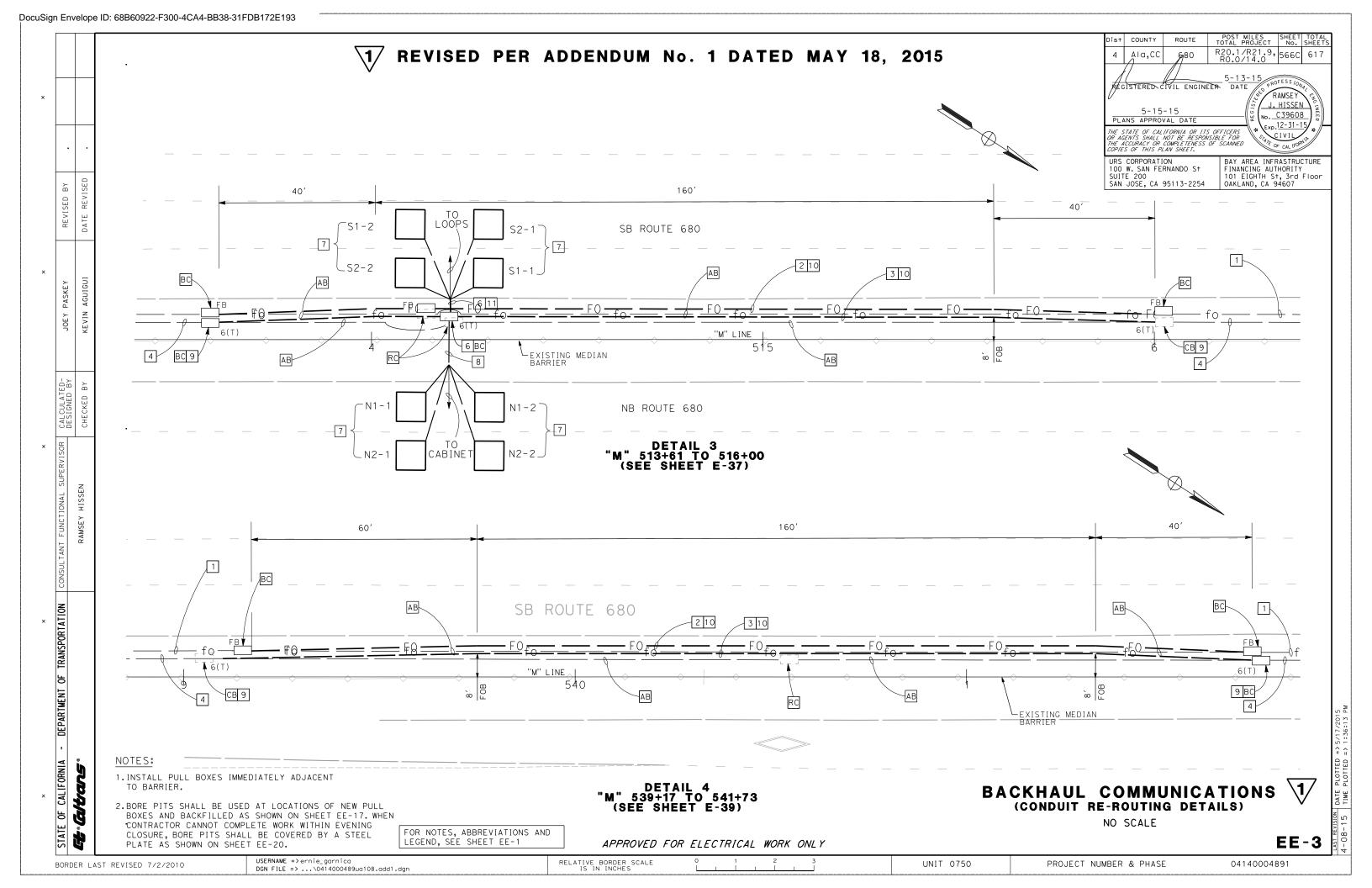
		NOTES:		INDEX OF BAC	CKHAUL COMMUNICATION PLANS:	7 4 Ala,CC 680 R20.1/R21.9, 566A
		 THIS PROJECT HAS BEEN DESIGNED USING CALIFORNIA DEPARTMENT OF PLANS AND STANDARD SPECIFICATIONS, 2010 EDITION. 	TRANSPORTATION (CALTRANS) STANDARD	SHEET NUMBER EE-1	TITLE NOTES, LEGEND, ABREVIATIONS,	5-13-15
×		2. ALL NEW INFRASTRUCTURE SHALL BE INSTALLED WITHIN RIGHT-OF-WAY AND IS RESPONSIBLE FOR ALL UTILITY IDENTIFICATION PRIOR TO INS		EE-2 TO EE-16	AND INDEX OF BACKHAUL COMMUNICATIONS PLANS BACKHAUL COMMUNICATIONS DETAILS (CONDUIT RE-ROUTING DETAILS)	RAMSEY J. HISSEN
		3. CALL UNDERGROUND SERVICE ALERT (U.S.A.) AT (800) 227-2600 AT L LOCATE ALL EXISTING UNDERGROUND UTILITIES. UTILITY LOCATION SE		EE-17	BACKHAUL COMMUNICATIONS DETAILS (FIBER OPTIC PULL BOX)	PLANS APPROVAL DATE THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR
		REQUIREMENTS. 4. THE FOLLOWING UNDERGROUND FACILITIES MAY BE LOCATED IN THE PR		EE-18	BACKHAUL COMMUNICATIONS DETAILS (FIBER OPTIC MARKER)	THE ACCURACY OR COMPLETENESS OF SCANNED VE OF CALLYOF URS CORPORATION 100 W. SAN FERNANDO S+ FINANCING AUTHORITY
>	I	CABLE FOR STREETLIGHTS, TRAFFIC SIGNALS, AND TRAFFIC OPERATION EXISTING FACILITIES SHALL BE PROTECTED-IN-PLACE. THE CONTRACTO JURISDICTION FOR LOCATIONS AT LEAST 2 WORKING DAYS PRIOR TO W	DR MUST CONTACT THE APPROPRIATE LÓCAL	EE-19	BACKHAUL COMMUNICATIONS DETAILS (LOOP DETECTOR PLACEMENT DETAIL)	SUITE 200 SAN JOSE, CA 95113-2254 101 EIGHTH St, 3rd F OAKLAND, CA 94607
REVISED	E RE	5. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND	LOCATION OF EXISTING UNDERGROUND AND	EE-20	BACKHAUL COMMUNICATIONS DETAILS (STEEL PLATE DETAIL)	
	DAT	OVERHEAD UTILITIES IS APPROXIMATE AND HAS NOT BEEN INDEPENDEN LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON PLANS WERE OBTAI COMMUNICATION NETWORK CONDUIT TESTING REPORT AND CALTRANS REC	NED FROM THE BAY AREA EXPRESS LANES CORDS AND PLANS. IT SHALL BE THE	EE-21	BACKHAUL COMMUNICATIONS DETAILS (TRUNKLINE MODIFICATION)	
X Y	AGUIGUI	CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL A UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRALL UTILITIES ARE SHOWN HEREON. THE DESIGN ENGINEER ASSUMES NOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. THE CONTRACTOREPAIR OF UTILITIES OR SURROUNDING INFRASTRUCTURE THAT IS DAM.	RUCTION. NO REPRESENTATION IS MADE THAT O RESPONSIBILITY FOR UTILITIES NOT SHOWN OR WILL NOT BE COMPENSATED FOR THE	EE-22	BACKHAUL COMMUNICATIONS QUANTITIES	
IOFY B	. z	6. CONTRACTOR SHALL PROTECT ALL EXISTING INFRASTRUCTURE AREAS NO RESPONSIBLE TO REPLACE OR REPAIR ANY DAMAGED INFRASTRUCTURE A	AREAS IN A TIMELY MANNER AT NO	LEGEND:		
		ADDITIONAL COST. THE CONTRACTOR SHALL PRESERVE AND PROTECT EX FEATURES, LANDSCAPING, AND IRRIGATION SYSTEMS, AND REPLACE OR AESTHETIC FEATURES, LANDSCAPING, AND IRRIGATION SYSTEMS DAMAGE	RECONSTRUCT ANY PLANTS, MATERIALS,	1 Exist 3"C, 1- 2 INSTALL 3"C,	-72 STR SMFO CABLE. PT.	
1;	≻ .	THE LANDSCAPE AND AESTHETICS PERFORMANCE SPECIFICATION. 7. CONDUIT ROUTING, PULL BOX, POLE, AND CABINET LOCATIONS ARE SCH	EMATIC FOR THE RURROSE OF CLARITY AND	3 INSTALL 3-3"	C, PT, 2#4 (120 V TOS POWER).	
JLATED-	IGNED BY	MAY DIFFER FROM ACTUAL INSTALLATION. FINAL LOCATIONS SHALL BE ENGINEER.		5 RC Exist No.	PT, 2#4 (120 V TOS POWER). . 6 PULL BOX AND INSTALL FIBER OPTIC PULL BOX WITH EXT	
CALCULATE	CHEC	8. ALL NEW CONDUIT SHALL BE INSTALLED PER THE CALTRANS STANDARD DETAILS ON THESE SHEETS UNLESS OTHERWISE NOTED ON THE PLANS.	SPECIFICATIONS AND PER SPECIFIED		RUNS AS REQUIRED FOR FIBER OPTIC INSTALLATION. SEE DETA OOP WIRES TO Exist 4 dic.	AIL A ON SHEET E-21.
×		9. THE CONTRACTOR SHALL PLACE ALL CONDUIT IN A MANNER THAT MINIM NOT TO EXCEED 1 FOOT PER 10 FEET.	MIZES HORIZONTAL AND VERTICAL BENDING,		TECTOR PLACEMENT DETAIL ON SHEET E-19. AND CC TO Exist 3"C. TERMINATE CONDUIT IN NEW No. 6	
SUPERV]	z	10. ANY REMOVAL OF PAVEMENT NECESSARY TO FACILITATE INSTALLATION	OF CONDUIT UNDER ROADWAY SHALL BE	PULL BOX. SI	PLICE Exist die in conduit runs to new dle in new ox as indicated on the plans.	
TIONAL	HISSE	REPLACED TO ITS ORIGINAL CONDITION. 11. PULL BOXES SHALL BE INSTALLED PER STANDARD PLANS AND PER DET	TAILS IN THESE PLANS. PULL BOXES SHALL		2#4 CONDUCTORS TO NEW 2#4 CONDUCTORS IN PULL BOX.	
FUNCT	RAMSEY	NOT BE INSTALLED IN SIDEWALK RAMPS NOR IN OR WITHIN TEN (10) F SWALES OR DITCHES. PULL BOXES TO BE INSTALLED IN THE PAVED R	EET OF ANY DRIVEWAY OR LOCATED IN		STUB-UP TO LOOPS.	
LTANT	α	12. THE COMPLETE ELECTRICAL SYSTEM, INCLUDING PULL BOXES AND VAUL WITH THE NATIONAL ELECTRIC CODE (NEC). ALL WORK SHALL BE IN CO		12 Exist 3"C, PI		
CONSU		13. ELECTRICAL PULL BOXES FOR CONDUIT SYSTEMS THAT DO NOT CONTAIN SPACING OF 500'.	N FIBER OPTIC CABLE SHALL HAVE A MAXIMUM	· ·	-12 STR SMFO CABLE. -72 STR SMFO CABLE.	
× TRANSPORTATION		14. LOCATION OF EXISTING PULL BOXES, VAULTS, TSCs, ARE APPROXIMATE PULL BOXES TO BE UTILIZED AS PART O THE BACKHAUL COMMUNICATION				
P.			GEND: RSP ES-1A, RSP ES 1-B, RSP ES-1C)			
IA - DEPARTMENT		BAIFA BAY AREA INFRASTRUCTURE FINANCING AUTHORITY CALTRANS CALIFORNIA DEPARTMENT OF TRANSPORTATION E ELECTRIC FOB FACE OF BARRIER FOT FIBER OPTIC TRUNKLINE	EXISTING FIBER OPTIC PULL BOX (SEE SHEET E-17 FOR INSTALLATION DETAIL)			
× CAL IF ORNIA	5	SMFO SINGLE MODE FIBER OPTIC STR STRAND			NOTES, LEG	
× CAL	/tra				ABBREVIATION INDEX OF BACKHAUL COM	
ATE OF	1 ° (C1)	1/ REVISED I	PER ADDENDUM No. 1	DATED MA		EE
STATE OF	7. 25	T REVISED I	PER ADDENDUM No. 1	DATED MA	AY 18, 2015	

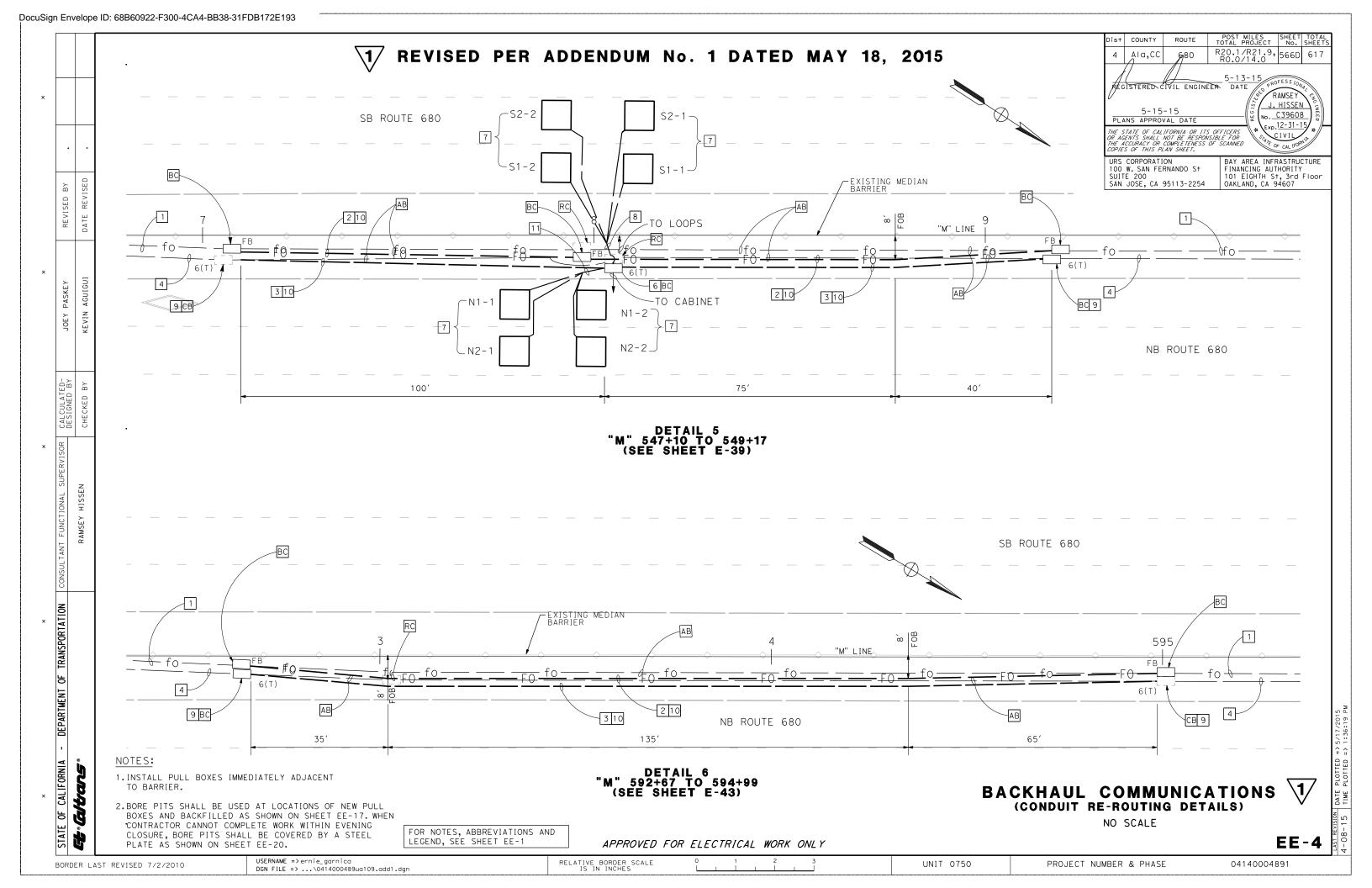
EE-1

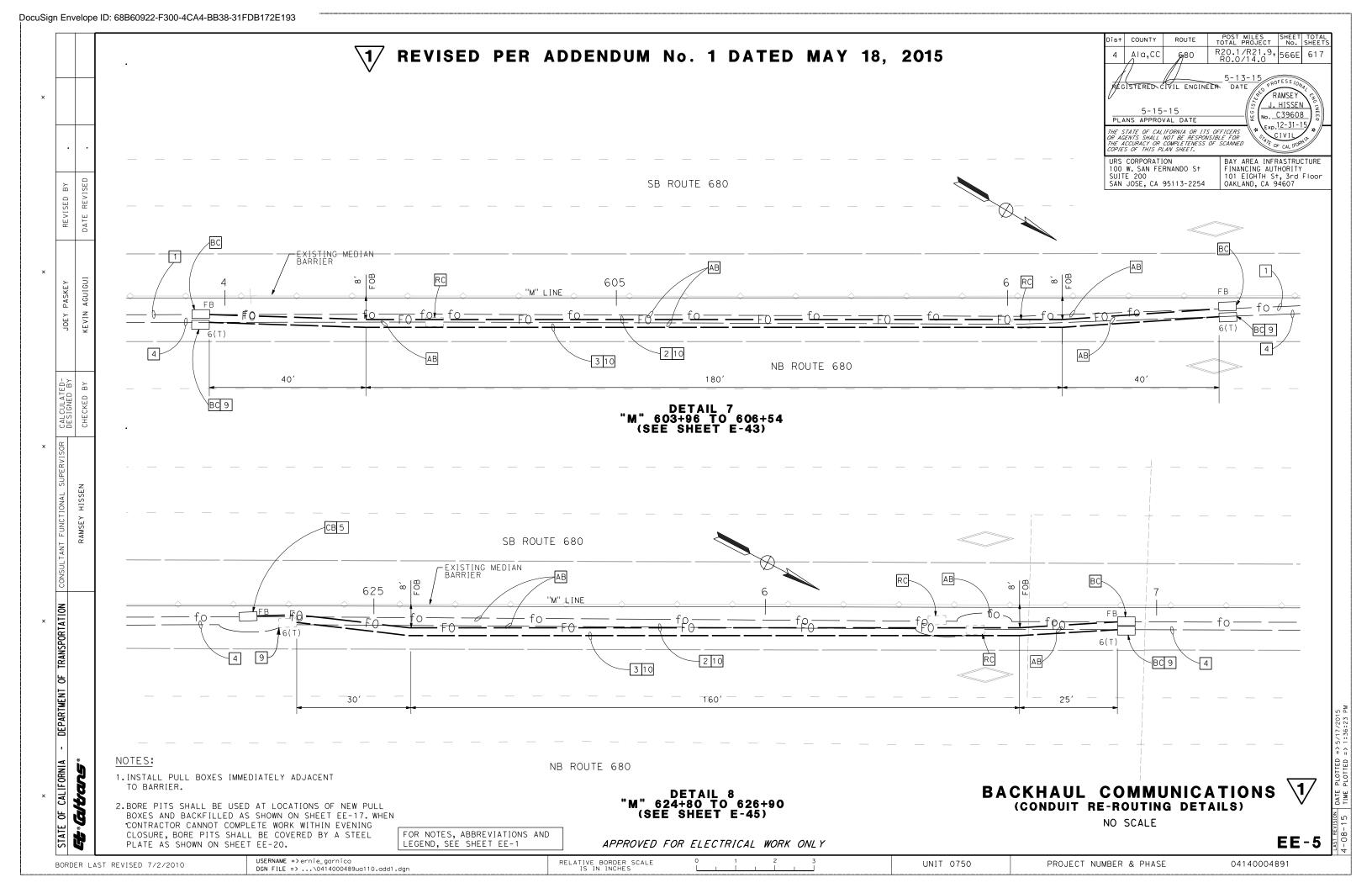
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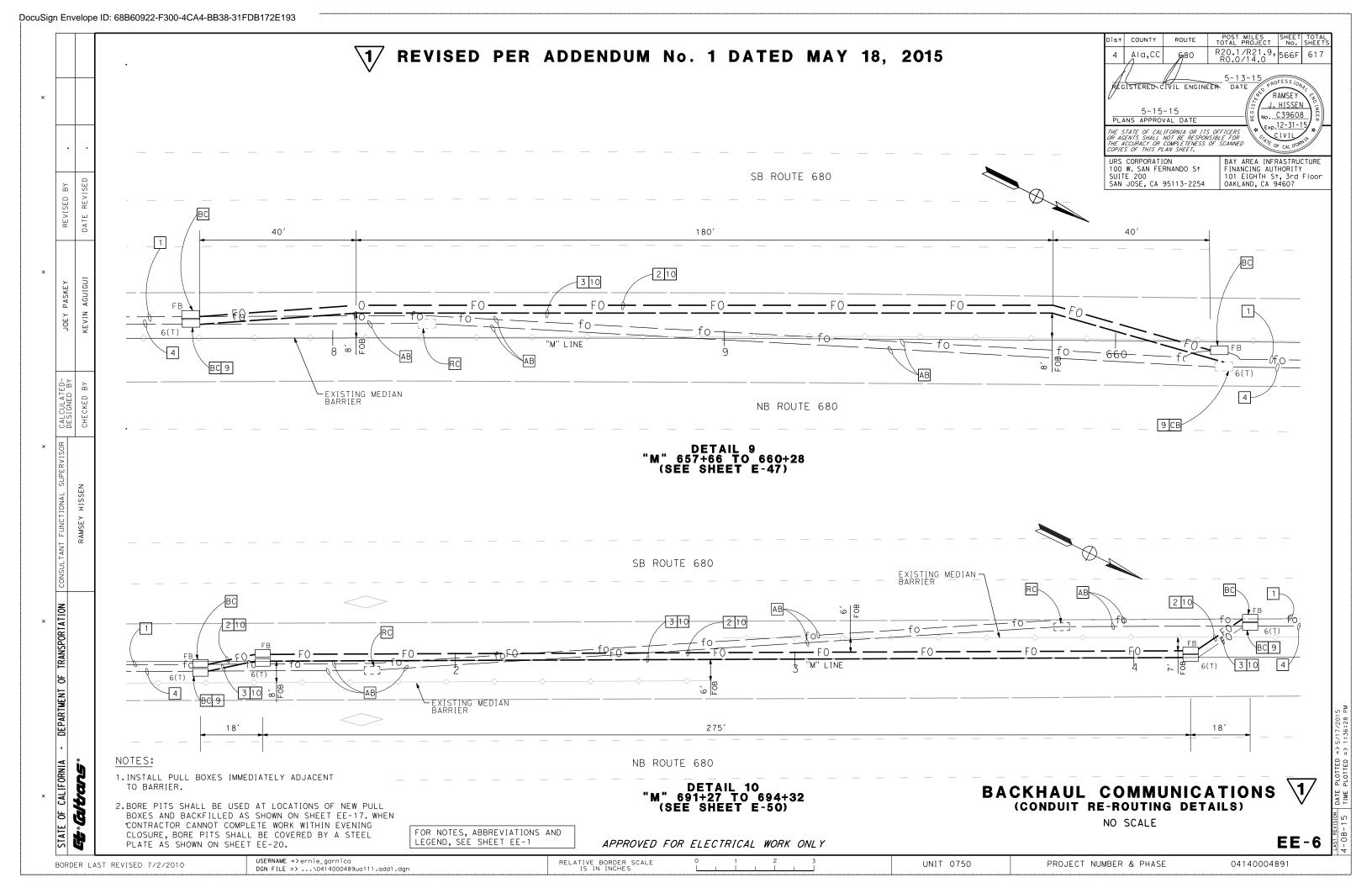
PROJECT NUMBER & PHASE

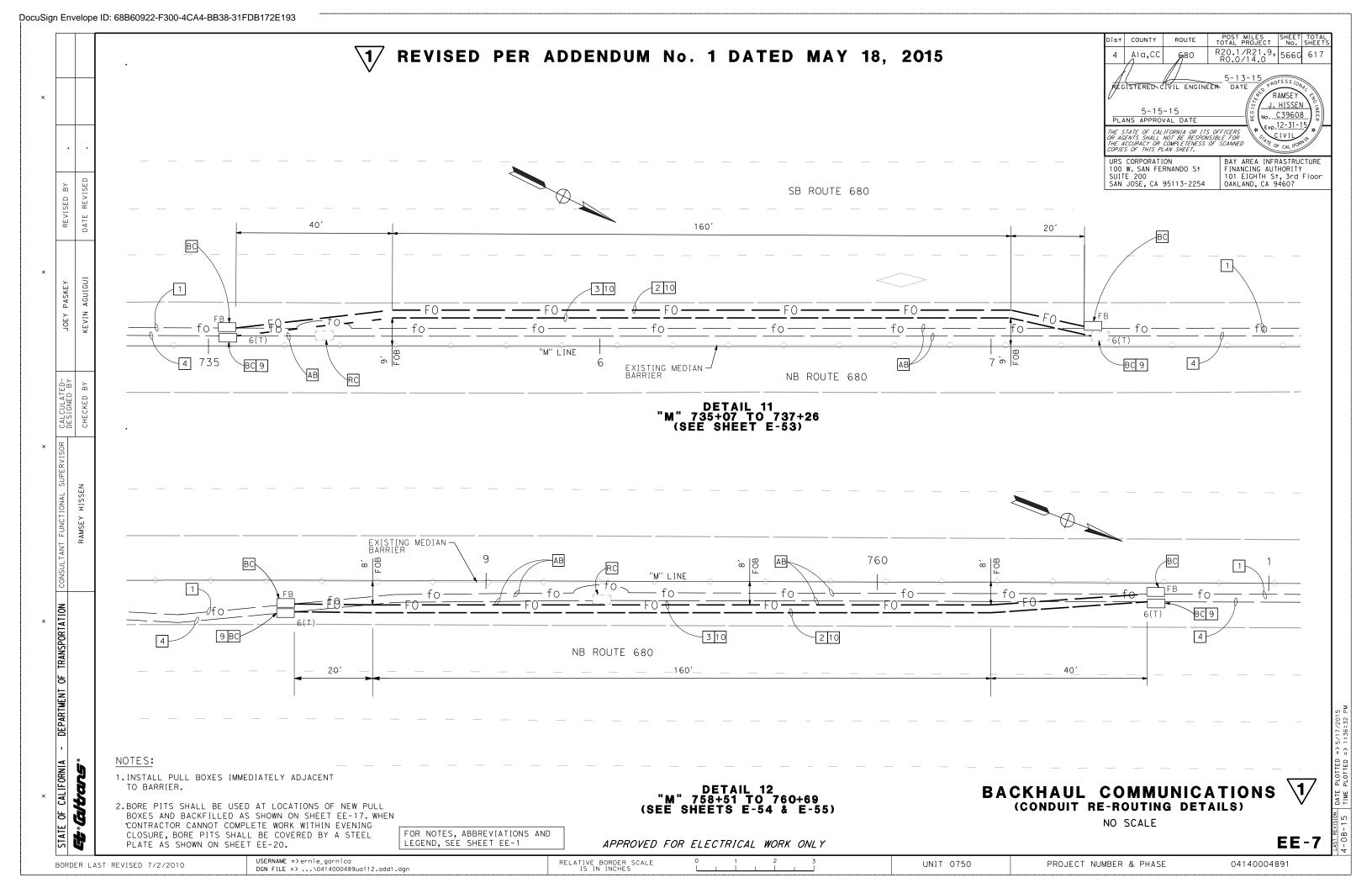


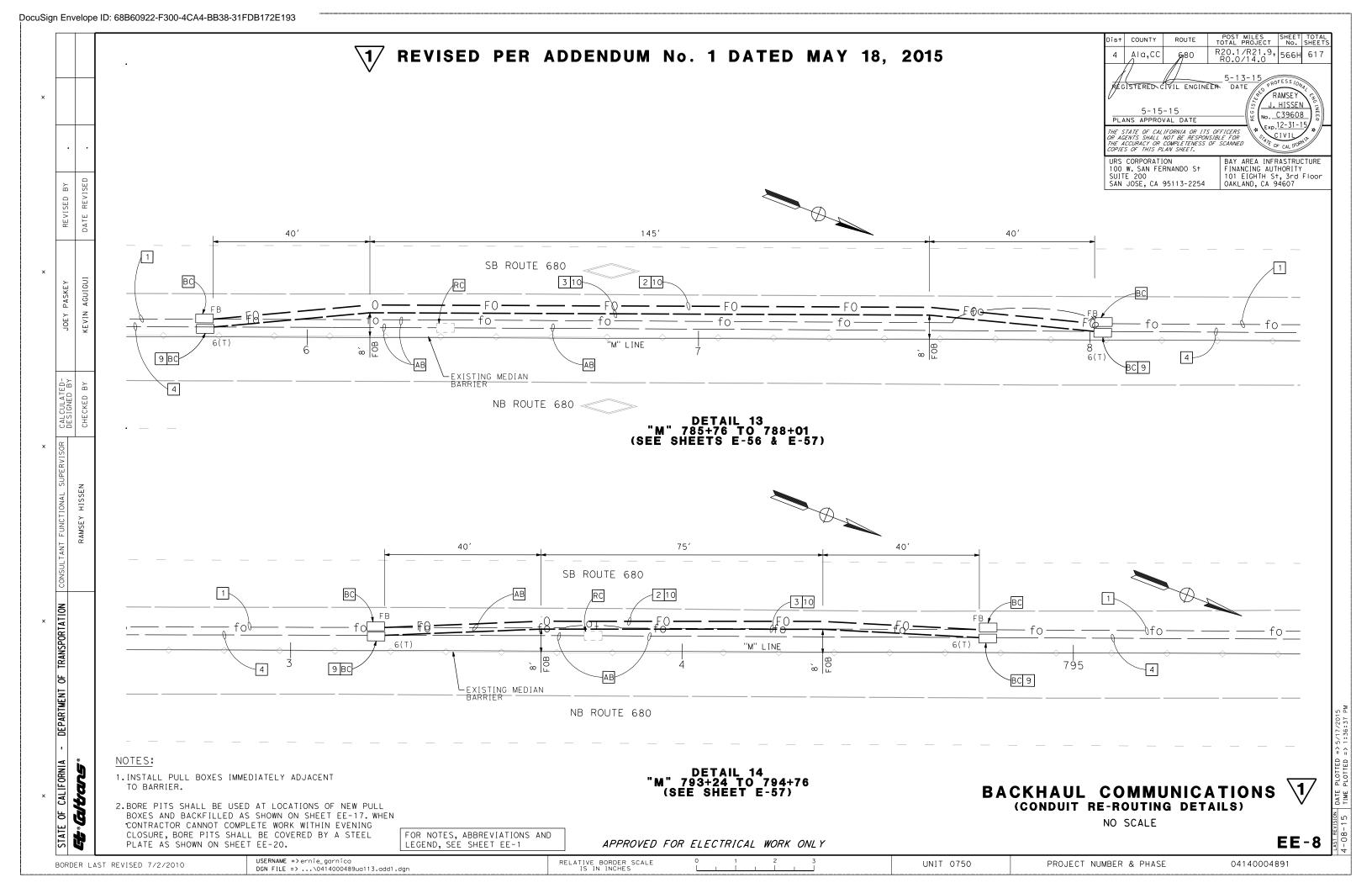


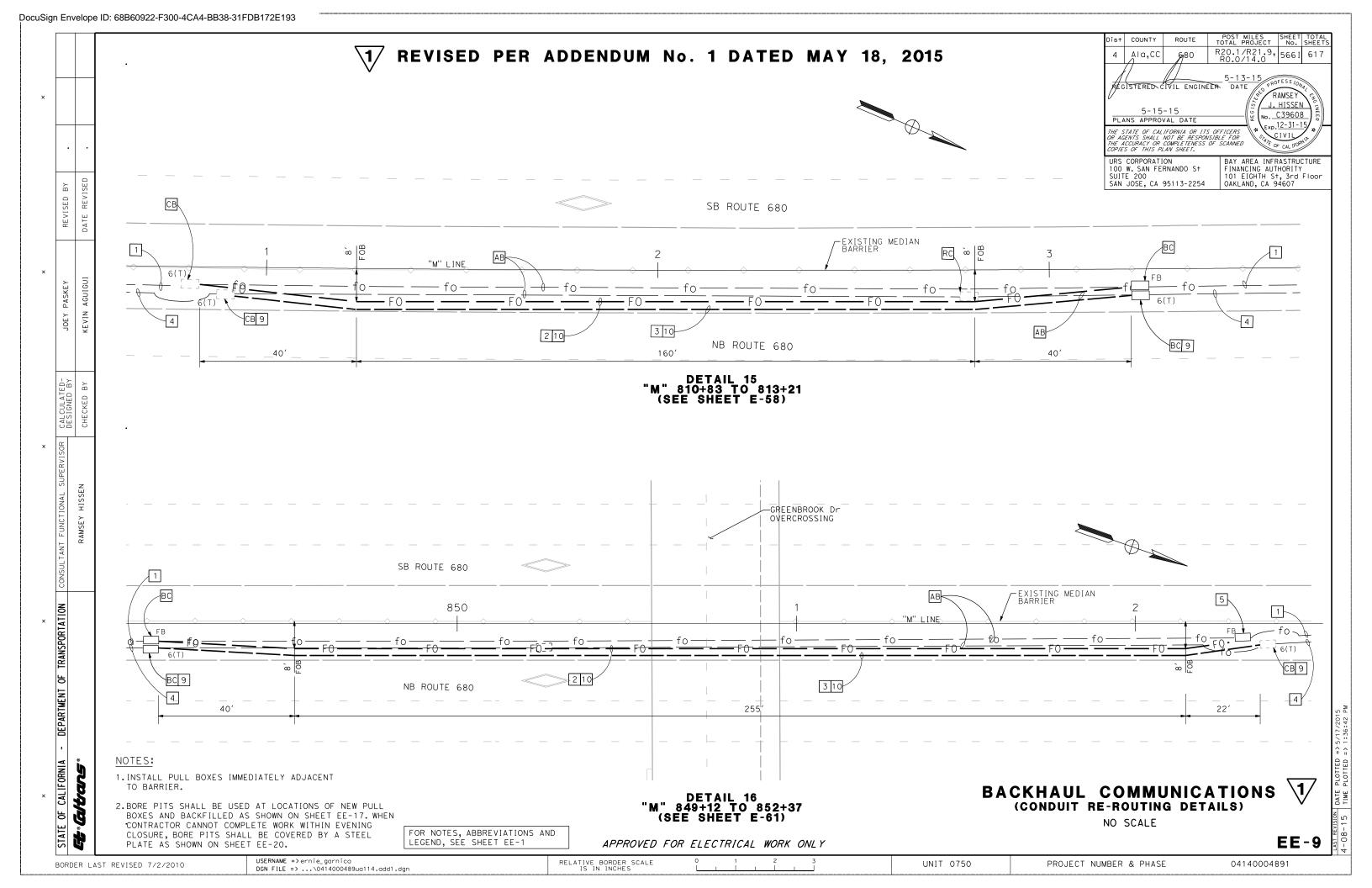


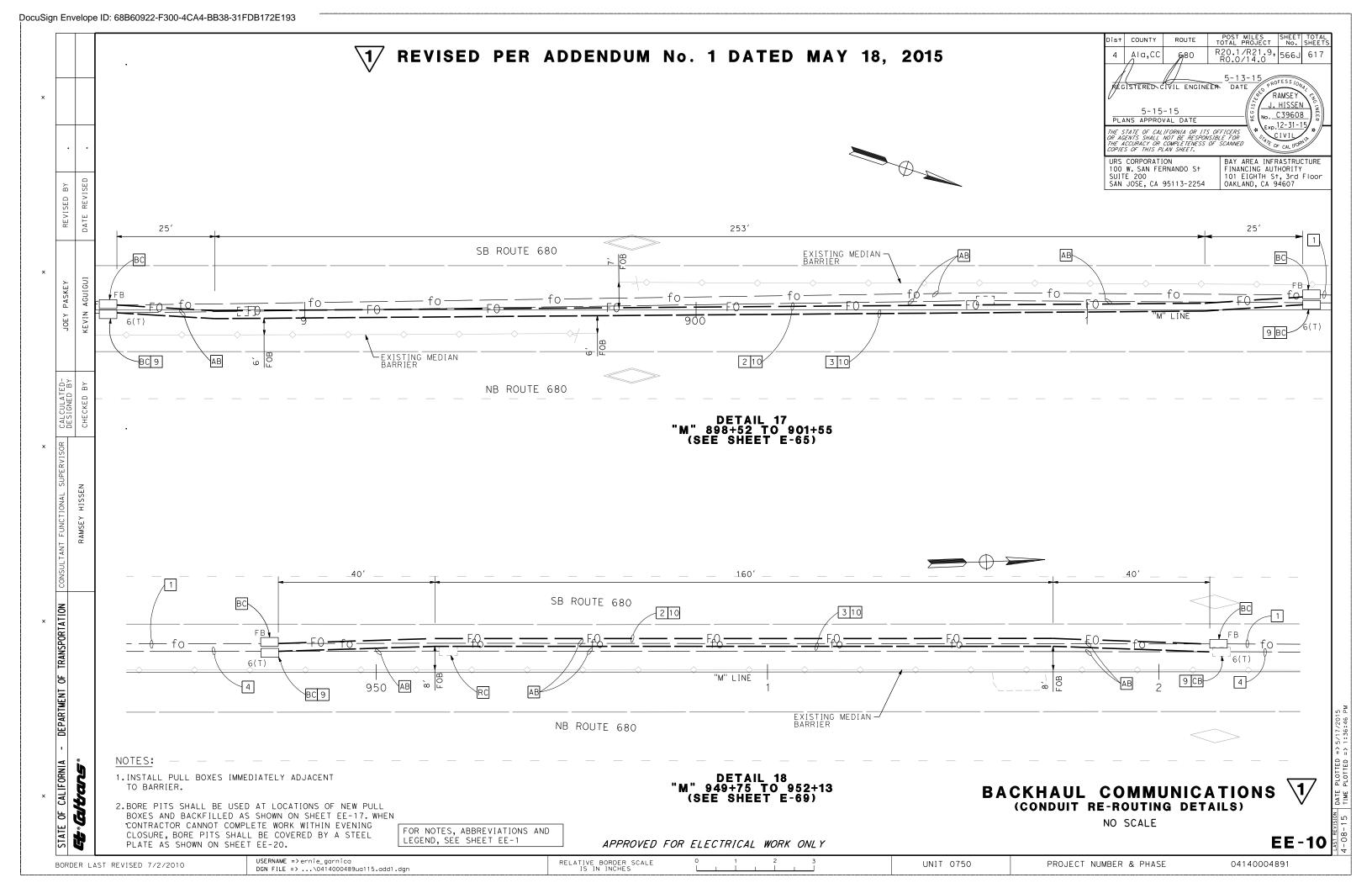


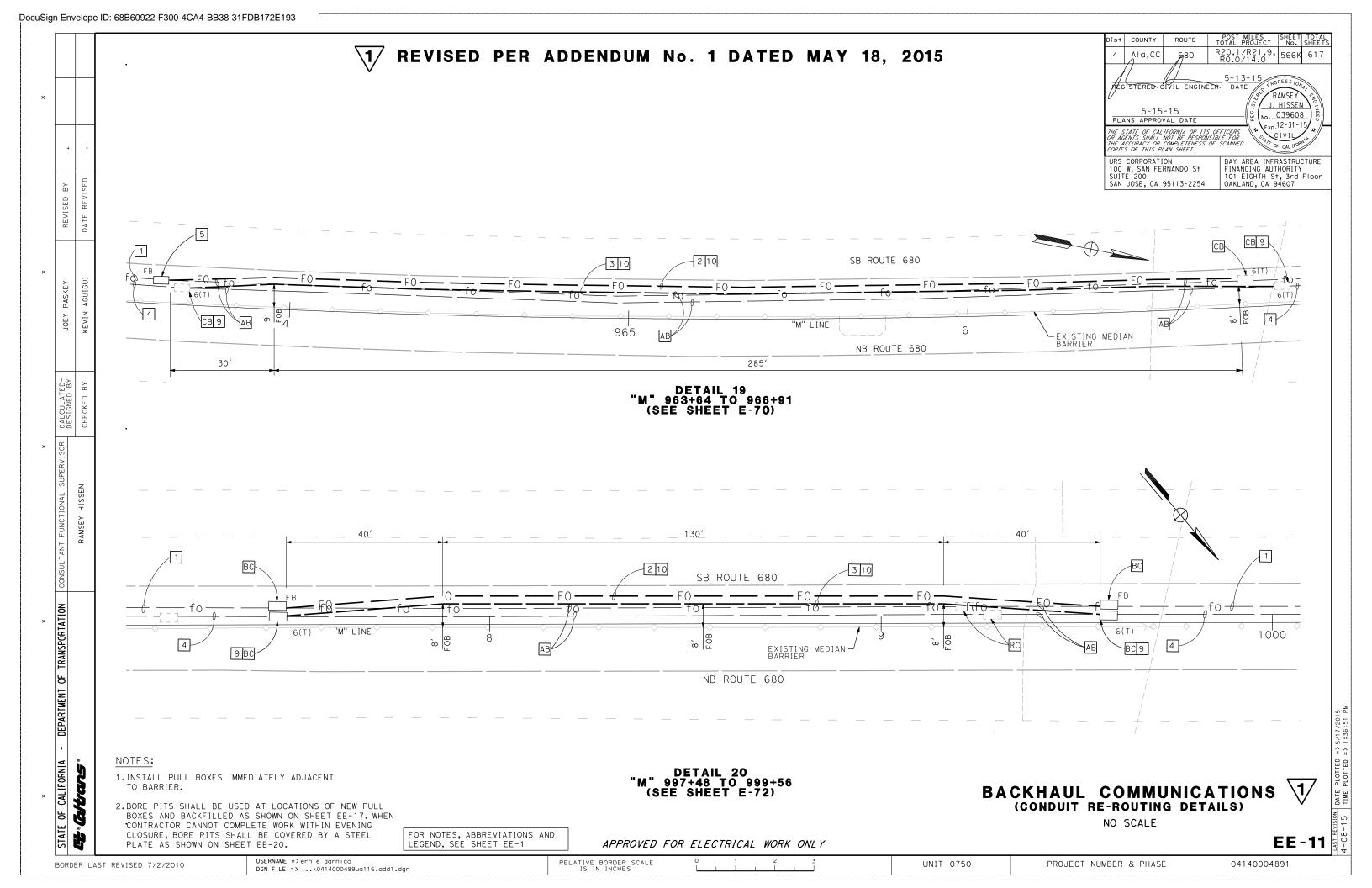


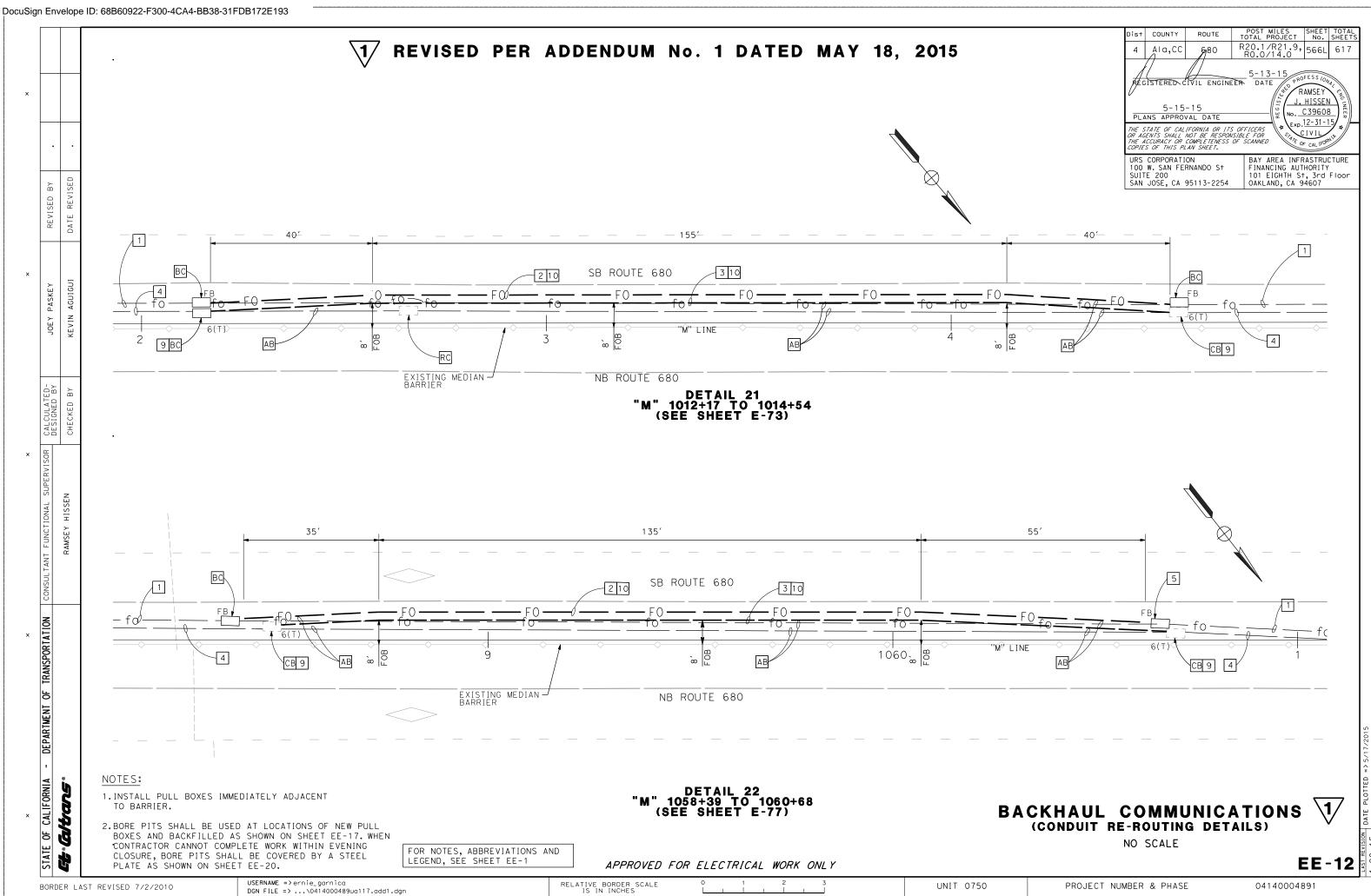


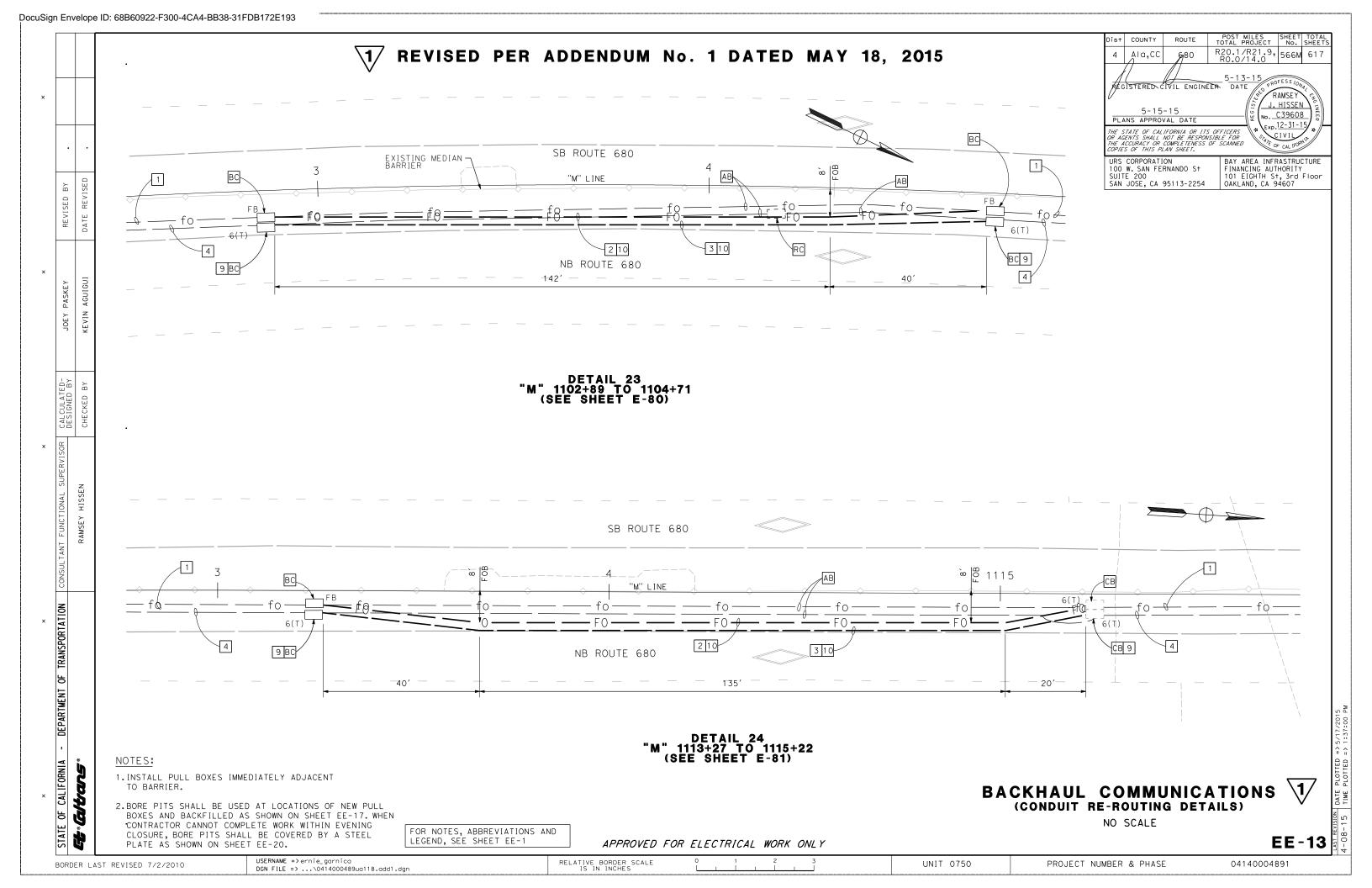


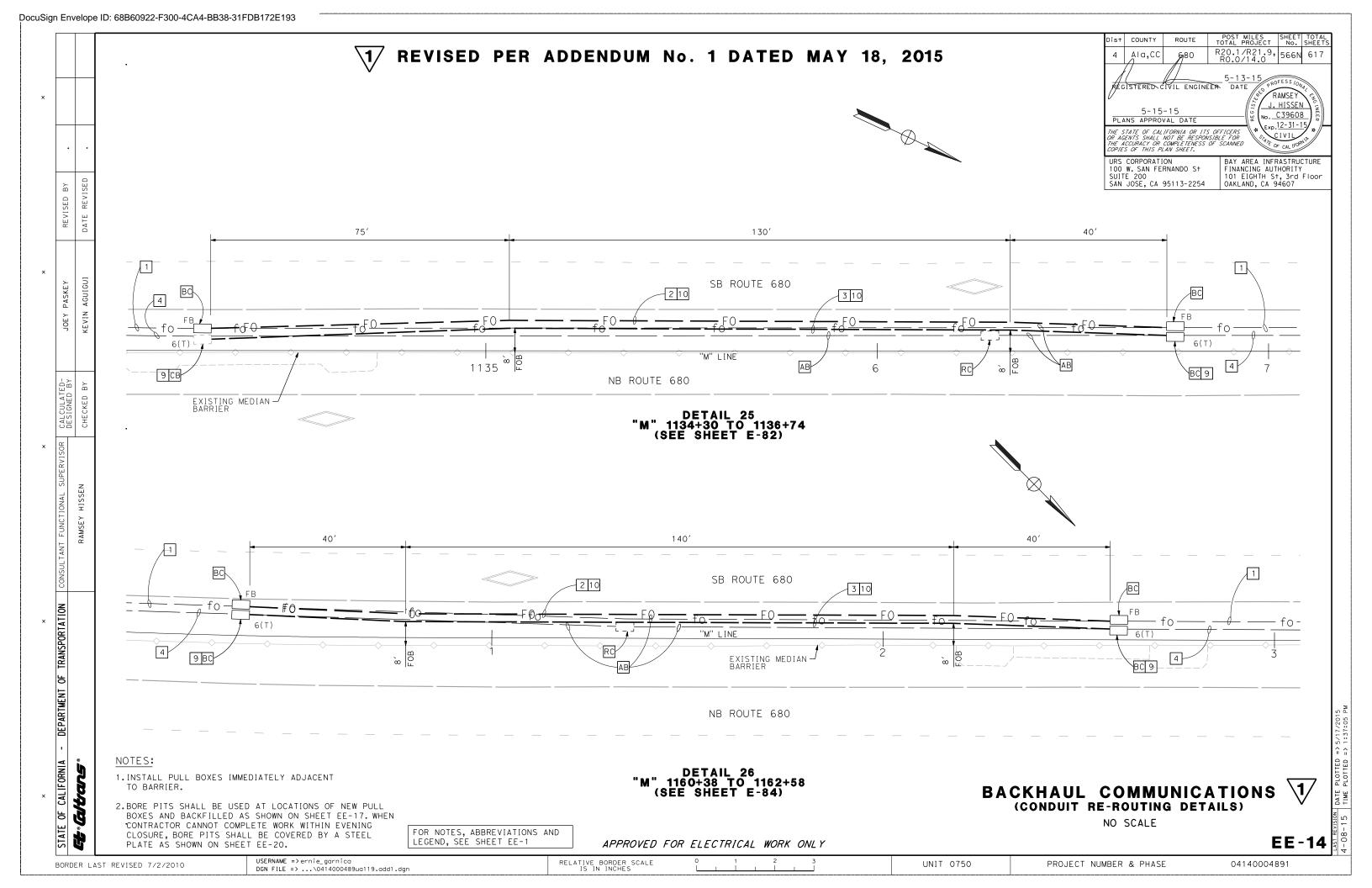


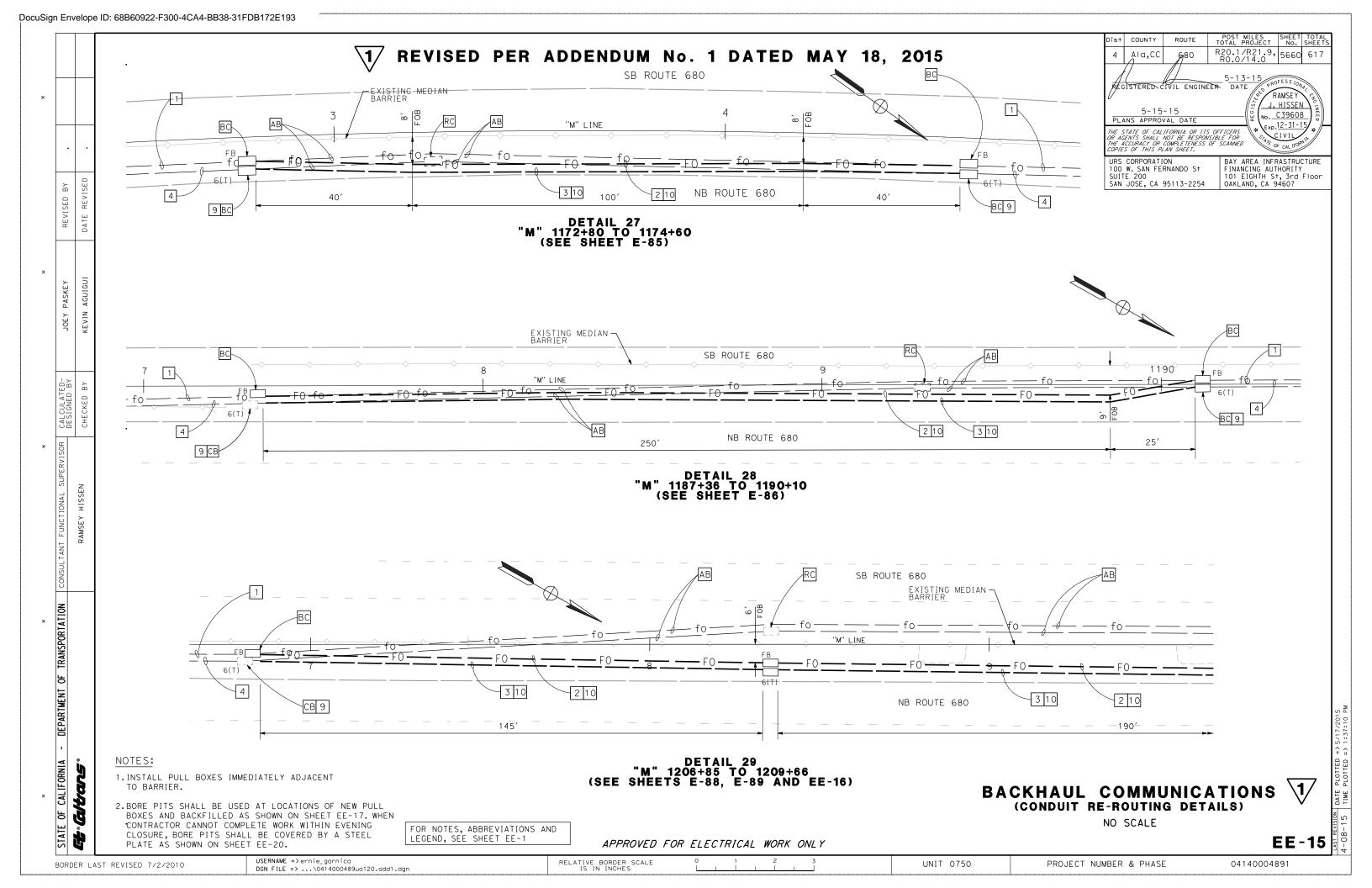


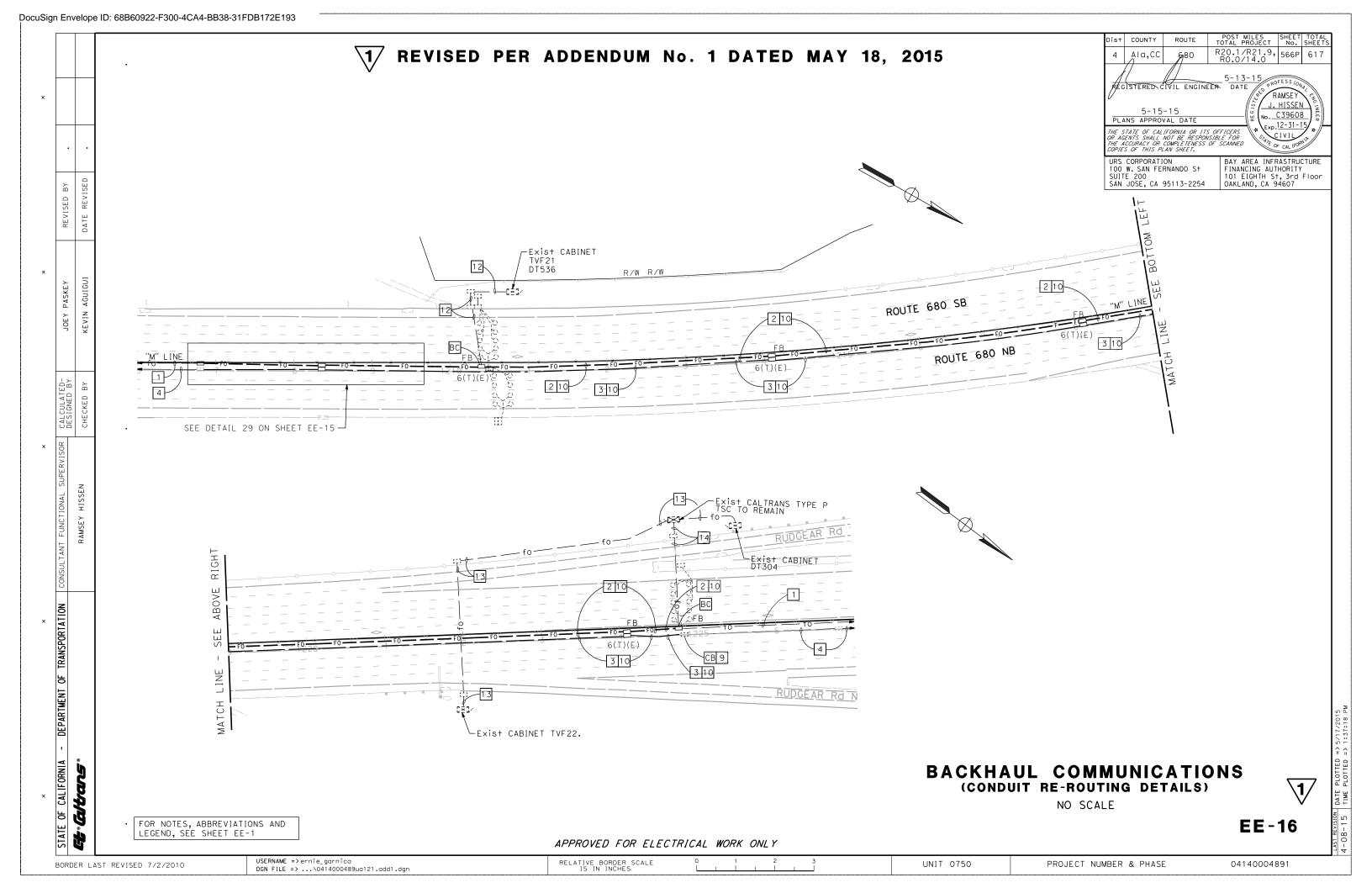












NOTES: (THIS SHEET ONLY)

1. CONCRETE SHOULD BE PLACED AROUND AND UNDER PULL BOXES (6" MINIMUM) AND SHOULD

- 2. PORTLAND CEMENT CONCRETE FLOOR OVER CLEAN CRUSHED ROCK SUMP, BOTTOM OF PULL BOX SHALL BE SLOPED TOWARD DRAIN PIPE FOR DRAINAGE AND SHALL HAVE SMOOTH FINISH.
- 3. PULL BOX SHALL BE PRECAST OF STEEL REINFORCED PORTLAND CEMENT CONCRETE. PULL BOX COVER SHALL BE POLYMER CONCRETE. PULL BOX AND COVER SHALL SUPPORT MINIMUM TEST LOAD OF 25,000 ibs IF BOX IS LOCATED IN PAVED AREAS, PULL BOX AND COVER SHALL CONFORM VERTICAL PROOF-LOAD STRENGTH REQUIREMENT AS PER CALTRANS STANDARD SPECIFICATIONS, SECTION 86-2.06.
- SURFACE LANDSCAPING. WHEN PULL BOX IS INSTALLED IN EXISTING SIDEWALK, PULL BOX COVER SHALL SIT FLUSH WITH THE PAVEMENT.
- 5. LOCKING MECHANISM SHALL BE PROVIDED FOR COVER. TWO %" DIAMETER BRASS OR STAINLESS STEEL STUB
- 6. "BAIFA TOS COMMUNICATIONS" SHALL BE CASTED ON THE TOP FACE OF ALL NEW PULL BOX COVERS OF NEW FO PULL BOXES.
- 7. MINIMUM PULL BOX DEPTH WITH EXTENSION SHALL BE 24".
- 8. SEE PLAN SHEETS FOR NUMBER AND SIZE OF CONDUIT.
- 9. ALL CONDUITS SHALL ENTER THROUGH KNOCKOUTS. IF MORE THAN 3 CONDUITS ARE REQUIRED IN SAME KNOCKOUT, KNOCKOUT SHALL BE WIDENED TO %" MORE THAN THE COMBINED CONDUIT WIDTH.
- 10. CONDUIT FROM THE TYPICAL BORE OR TRENCH SECTION SHOULD NOT DEFLECT BY MORE THAN 1 1/2 PER 10" FROM THE ALIGNMENT PRECEDING OR THE FOLLOWING THE PULL BOX.
- CABLE PULLING. IF EXISTING CONDUIT USED, CONTRACTOR SHALL MODIFY CONDUIT SWEEP (IF NEEDED) AS SHOWN. IF NEW CONDUIT USED, CONTRACTOR SHALL INSTALL CONDUIT ELBOW AS SHOWN.
- 12. EXCESS CONDUIT FOR ALL CONDUIT ENDS SHALL BE CUT BACK TO PROVIDE STUB ENDS OF 1" MINIMUM TO 2" MAXIMUM.
- 14. INSTALL CAPS OR DUCT PLUGS FOR ALL CONDUITS.
- PERMANENT MARKERS AS SHOWN ON DRAWING SHEET EE-18.

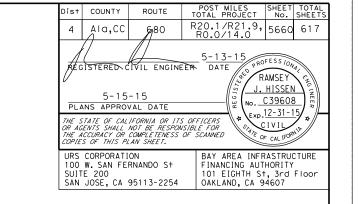
- COUPLING MAY NOT BE NECESSARY FOR NEW CONDUIT BY DIRECTIONAL BORING SHALL ENTER THE PULL BOX WITH
- (2) WARNING TAPE (FOR NEW CONDUIT IF INSTALLED BY TRENCHING).

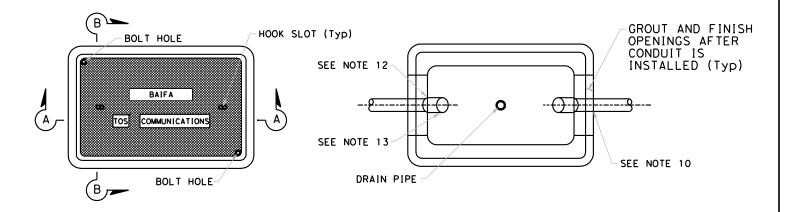
REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

- CONTAIN A MINIMUM OF 550 Ibs OF PORTLAND CEMENT PER CUBIC YARD.
- 4. IF APPLICABLE, PULL BOX HEIGHT ABOVE EXISTING DIRT GRADE SHALL PERMIT 1" OF FUTURE
- BOLTS, NUTS, AND WASHERS. 2 PER BOX, RECESS IN COVER FOR NUT.
- 11. BOTTOM OF CONDUIT CENTERLINE SHALL BE ALIGNED TO EXIT TOP OF PULL BOX TO FACILITATE
- 13. ALL METALLIC CONDUIT SHALL HAVE THREADED METALLIC BUSHINGS. ALL PVC AND HDPE CONDUITS SHALL HAVE BELL ENDS.
- 15. ALL CONDUITS AND PULL BOXES CONTAINING FIBER OPTIC CABLE SHALL HAVE

NOTES: (THIS SHEET ONLY)

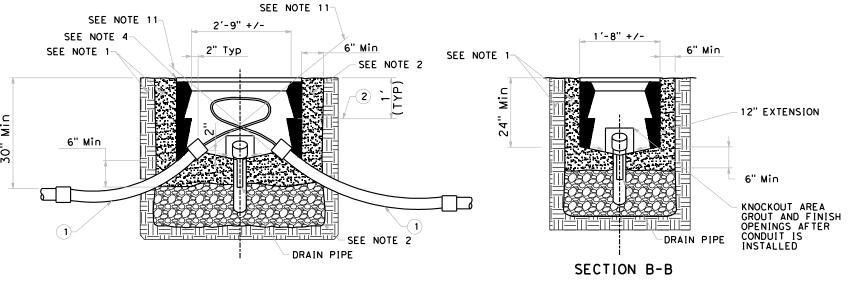
1) 45 DEGREE ELBOW, 3'RADIUS Min ELBOW AND INSTALLED BY DIRECTIONAL BORING. NEW CONDUIT INSTALLED BENDING RADIUS OF 3'MIN.





PLAN VIEW

PLAN VIEW WITHOUT COVER



SECTION A-A

BACKHAUL COMMUNICATIONS (FIBER OPTIC PULL BOX)

NO SCALE

EE-17

USERNAME =>ernie_garnica
DGN FILE => ...\0414000489ua122.add1.dgn

RELATIVE BORDER SCALE
IS IN INCHES

UNIT 0750

PROJECT NUMBER & PHASE

04140004891

REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

POST MILES SHEET TOTAL TOTAL PROJECT No. SHEET Dis+ COUNTY R20.1/R21.9, 566R 617 Ala,CC 6,80 REGISTERED CIVIL ENGINEER DATE RAMSEY J. HISSEN 5-15-15 No. <u>C39608</u> PLANS APPROVAL DATE Exp.12-31-1 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. CIVIL

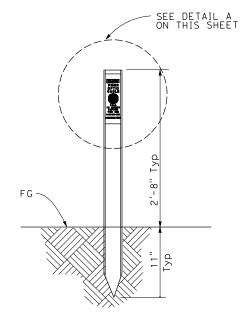
URS CORPORATION 100 W. SAN FERNANDO S+ SUITE 200 SAN JOSE, CA 95113-2254

BAY AREA INFRASTRUCTURE FINANCING AUTHORITY
101 EIGHTH St, 3rd Floor
OAKLAND, CA 94607

CALTRANS STANDARD TYPE K-2 OBJECT MARKER WITH 6"x12" YELLOW REFLECTIVE BACKGROUND (DIAMOND GRADE SHEETING) AND BLACK LETTERS _1 1/2" Max 21/2" 21/4" Min SOIL EMBEDDED~ FLEXIBLE POST WITH VERTICAL ORIENTATION OF SHEETING

4" WARNING BURIED FIBER CALL BEFORE YOU DIG 1-510-286-4444

PERMANENT FIBER OPTIC CABLE MARKER PAVED AREAS



PERMANENT FIBER OPTIC CABLE MARKER UNPAVED AREAS



DETAIL A

PERMANENT FIBER OPTIC **VAULT OR PULL BOX MARKER**

NOTE: IN UNPAVED AREAS, INSTALL ONE MARKER 1 FOOT AWAY FROM EACH VAULT OR PULL BOX IN WHICH FIBER OPTIC CABLE IS INSTALLED.

BACKHAUL COMMUNICATIONS (FIBER OPTIC MARKING)

NO SCALE

EE-18

USERNAME =>ernie_garnica
DGN FILE => ...\0414000489ua123.add1.dgn RELATIVE BORDER SCALE
IS IN INCHES UNIT 0750 04140004891 PROJECT NUMBER & PHASE

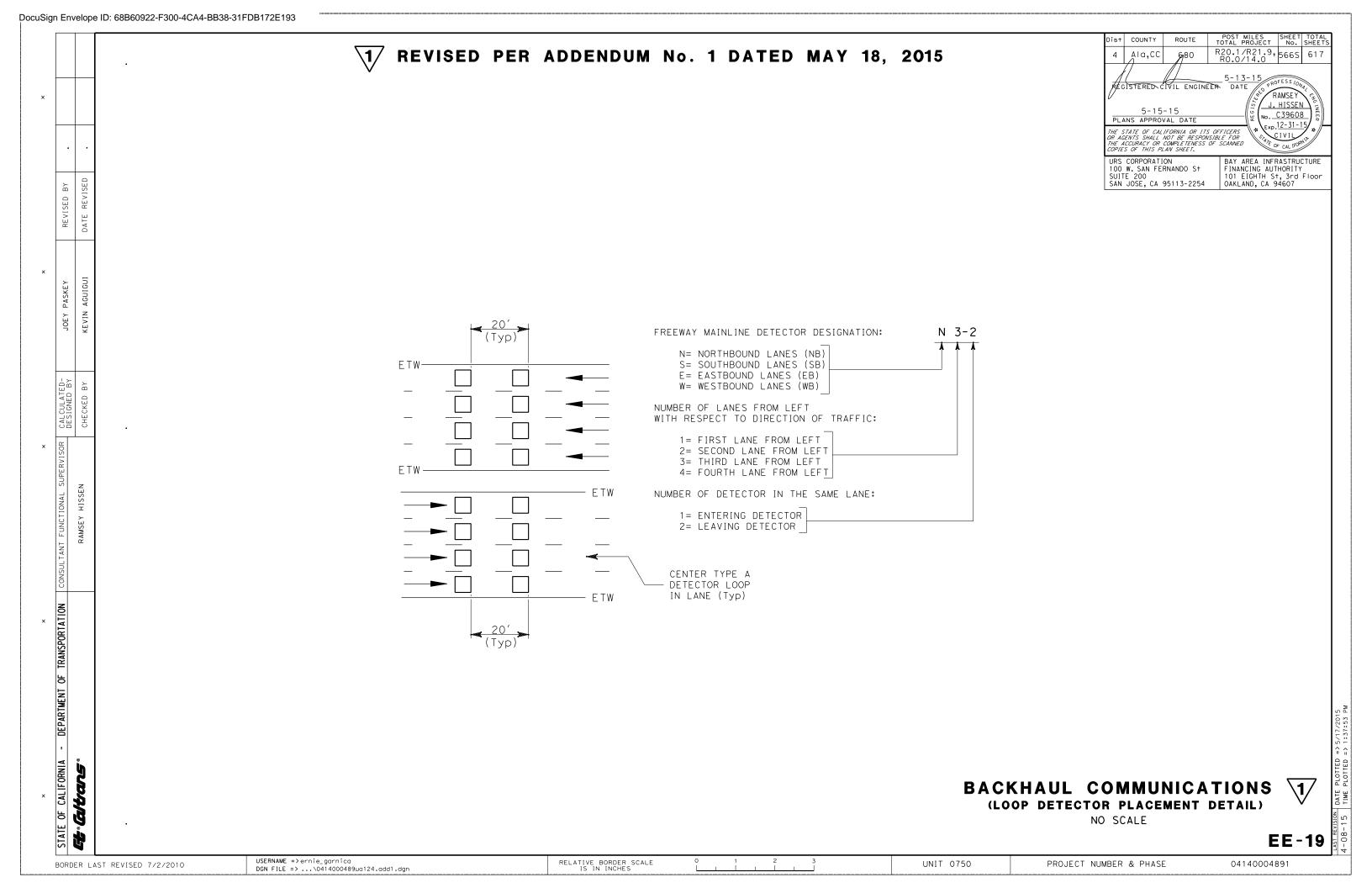
DEPARTMENT OF TRANSPORTATION CALIFORNIA

REVISED

Gitans

BORDER LAST REVISED 7/2/2010

뇽



BACKHAUL COMMUNICATIONS (PULL BOX MODIFICATION)

NO SCALE

EE-21

USERNAME =>ernie_garnica
DGN FILE => ...\0414000489ua126.add1.dgn BORDER LAST REVISED 7/2/2010

CALIFORNIA

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altars

RELATIVE BORDER SCALE
IS IN INCHES

UNIT 0750

PROJECT NUMBER & PHASE

04140004891

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BORDER LAST REVISED 7/2/2010

PROJECT NUMBER & PHASE

04140004891

REDISTERED CIVIL ENGINEER

July 19, 2013

THE STATE OF CALIFORNIA OR ITS OFFICERS OF AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

C48815 Exp. 9-30-14 CIVIL

O

STANDARD

TO ACCOMPANY PLANS DATED _

TABLE 3

ADVANCE WARNING SIG	N SPAC	ING					
	DISTANCE	DISTANCE BETWEEN SIGNS *					
ROAD TYPE	Α	В	С				
	ft	f†	ft				
URBAN - 25 mph OR LESS	100	100	100				
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250				
URBAN - MORE THAN 40 mph	350	350	350				
RURAL	500	500	500				
EXPRESSWAY / FREEWAY	1000	1500	2640				

 \star - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommmended distances.

TABLE 1

				RITERIA VICE SP			
		MINIMUM TA DTH OF OF	MAXIMUM CHANNELIZING DEVICE SPACING				
SPEED	1010 111	DIII OI OI	1361 12 1	Х	Υ	z **	
(S)	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	TAPER	TANGENT	CONFLIC
mph	f†	f†	ft	f†	ft	f†	f†
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

* - For other offsets, use the following merging taper length formula for L: For speed of 40 mph or less, $L = WS^2/60$ For speed of 45 mph or more, L = WS

Where: L = Taper length in feet

W = Width of offset in feet

S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LON	GITUDINA FLAGGER		R SPACE SPACING	
		DOW	NGRADE Min	D ***
SPEED *	Min D **	-3%	-6%	-9%
mph	ft	f†	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

- * Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph
- ** Longitudinal buffer space or flagger station spacing
- *** Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

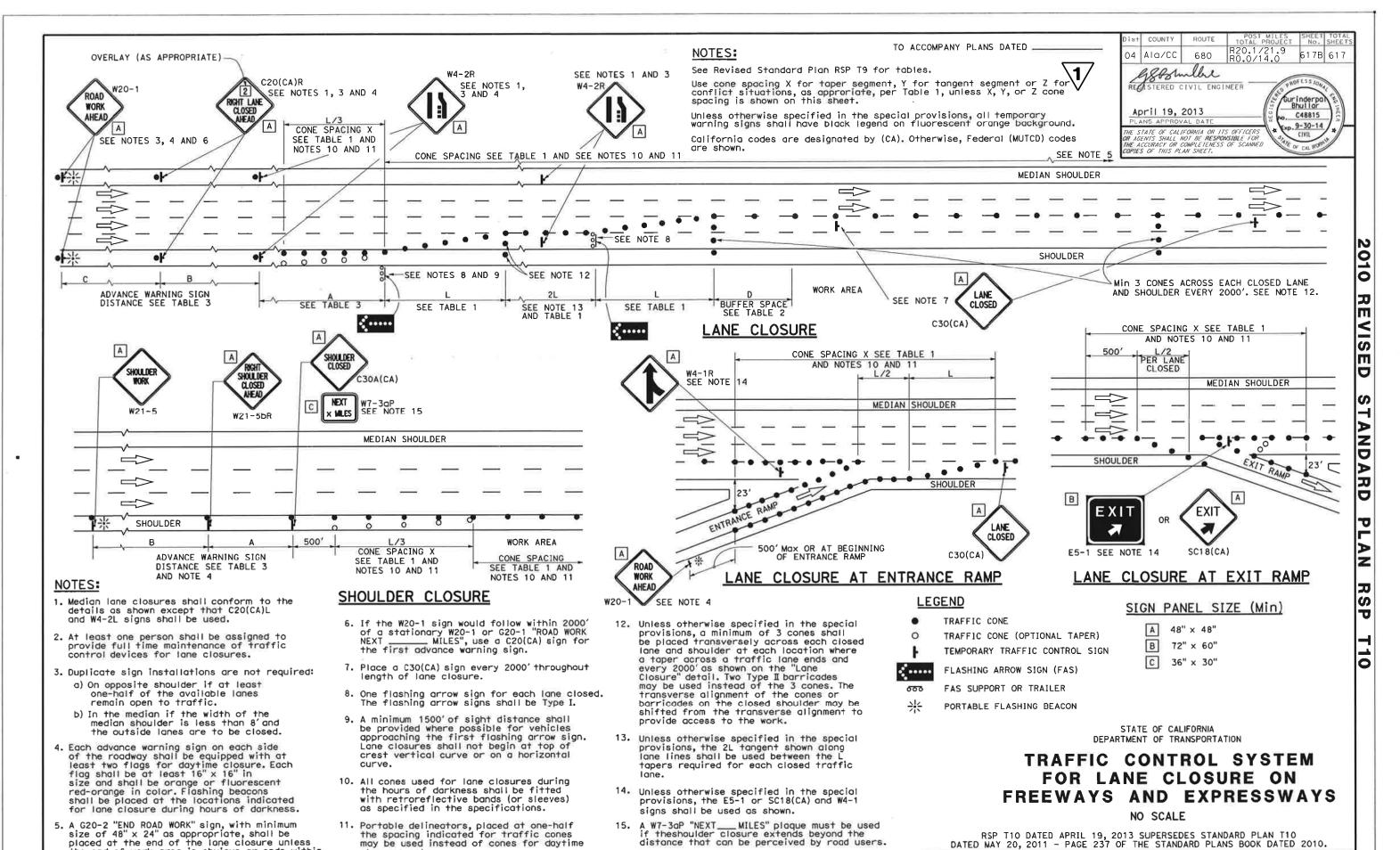
NO SCALE

1/ REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

the end of work area is obvious or ends within

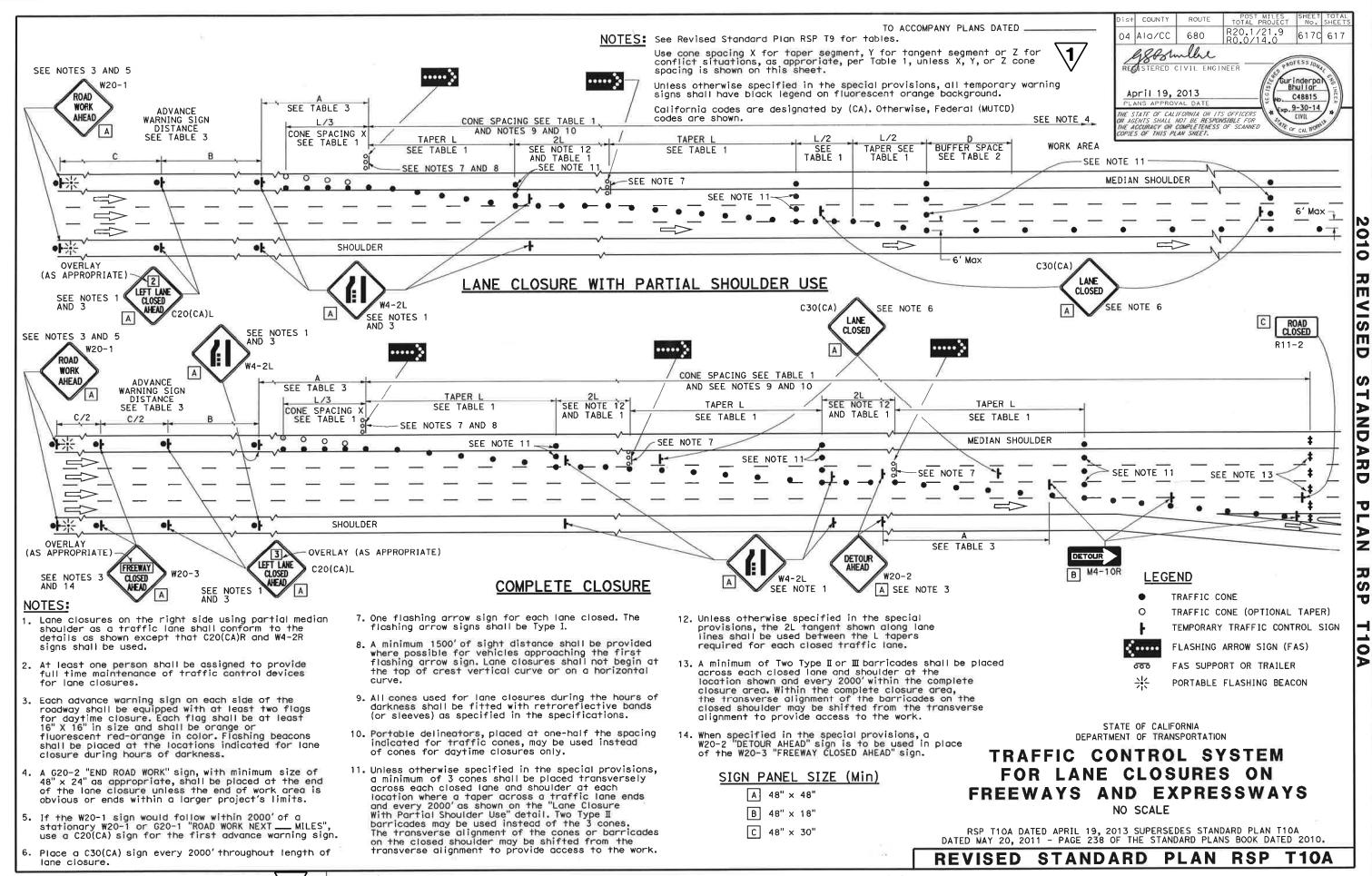
a larger project's limits.



may be used instead of cones for daytime

closures only.

REVISED STANDARD PLAN RSP T10



REVISED PER ADDENDUM No. 1 DATED MAY 18, 2015